DOCUMENT RESUME

ED 354 165 SO 019 317

AUTHOR Lewin, Keith M.
TITLE Education in Austerity: Options for Planners. Fundamentals for Planning 36.
INSTITUTION United Nations Educational, Scientific, and Cultural Organization, Paris (France). International Inst. for Educational Planning.
REPORT NO ISBN-92-803-1126-3
PUB DATE 87
NOTE 137p.
PUB TYPE Books (010) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS Business Cycles; Developed Nations; *Developing Nations; *Developmental Programs; Economic Change; Economic Development; Economic Factors; *Economic Impact; *Educational Development; Educational Finance; *Educational Planning; Educational Strategies; Elementary Secondary Education; Foreign Countries; Global Approach; International Organizations; International Programs; *Resource Allocation
IDENTIFIERS *Recession

ABSTRACT

This book explores the issues raised by the changing climate within which educational planning will take place in the final years of the 20th century. The volume focuses on the problems faced by countries hardest hit by economic recession and the need for adjustment to a changing economic environment. Organized into six chapters, the book addresses specific concerns following an introduction. The first concern, explored in chapters 2 and 3, charts recent trends in educational financing in developing countries, emphasizing the important differences that have emerged in the ability and willingness to allocate resources to education in different countries. Chapter 4 discusses the consequences that are likely to follow from level funding and diminished resources for education and develops eight propositions that illustrate the consequences. Austerity may bring with it unexpected changes. The changes are not simply those that might be anticipated from a reversal of growth patterns, and they have qualitatively different characteristics. Chapter 5 looks at themes that provide the basis for planning educational provision in austerity. It includes a discussion of changes in organizational climate in conditions of meagerness and contraction; proposals for assessment of the room to maneuver that exists in educational policy; suggestions for the development of monitoring systems that can indicate the sensitivity of educational quality to changes in inputs; and a review of the options open to resist contraction in resources, increase the efficiency of delivery, and refinance provision from sources other than public expenditure. Chapter 6 presents concluding remarks that synthesize the main findings and emphasize the central theme of protecting educational provision for the most vulnerable groups in developing countries that are most at risk for reductions in expenditures. A bibliography of more than 100 citations is included. (DB)

Fundamentals of educational planning

ED354165

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

J. HALL

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SO 019 317

BEST COPY AVAILABLE

Included in the series*:

2. *The relation of educational plans to economic and social planning*
R. Poignant
4. *Planning and the educational administrator*
C.E. Beeby
5. *The social context of educational planning*
C.A. Anderson
6. *The costing of educational plans*
J. Vaizey, J.D. Chesswas
7. *The problems of rural education*
V.L. Griffiths
8. *Educational planning: the adviser's rôle*
Adam Curle
9. *Demographic aspects of educational planning*
Ta Ngoc Châu
10. *The analysis of educational costs and expenditure*
Jacques Hallak
11. *The professional identity of the educational planner*
Adam Curle
12. *The conditions for success in educational planning*
G.C. Ruscoe
13. *Cost-benefit analysis in educational planning*
Maureen Woodhall
18. *Planning educational assistance for the second development decade*
H.M. Phillips
20. *Realistic educational planning*
K.R. McKinnon
21. *Planning education in relation to rural development*
G.M. Coverdale
22. *Alternatives and decisions in educational planning*
John D. Montgomery
23. *Planning the school curriculum*
Arieh Lewy
24. *Cost factors in planning educational technological systems*
Dean T. Jamison
25. *The planner and lifelong education*
Pierre Furter
26. *Education and employment: a critical appraisal*
Martin Carnoy
27. *Planning teacher demand and supply*
Peter Williams
28. *Planning early childhood care and education in developing countries*
Alastair Heron
29. *Communication media in education for low-income countries*
Emile G. McAnany, John K. Mayo
30. *The planning of nonformal education*
David R. Evans
31. *Education, training and the traditional sector*
Jacques Hallak and Françoise Caillods
32. *Higher education and employment: the IIEP experience in five less-developed countries*
George Psacharopoulos and Bikas C. Sanyal
33. *Educational planning as a social process*
Thierry Malan
34. *Higher education and social stratification: an international comparative study*
Torsten Husén
35. *A conceptual framework for the development of lifelong education in the USSR*
Alexandre Vladislavlev
36. *Education in austerity: options for planners*
Keith Lewin

* Also published in French. Other titles to appear.

Education in austerity: options for planners

Keith M. Lewin

Paris 1987
Unesco: International Institute for Educational Planning

5

The Swedish International Development Authority (SIDA)
has provided financial assistance for the publication of this booklet

Published in 1987 by the United Nations
Educational, Scientific and Cultural Organization,
7 Place de Fontenoy, 75700 Paris
Printed by Ceuterick, Louvain

Cover design by Bruno Pfäffli
ISBN 92-803-1126-3

© Unesco 1987
Printed in Belgium

Fundamentals of educational planning

The booklets in this series are written primarily for two types of clientele: those engaged in — or preparing for — educational planning and administration, especially in developing countries; and others, less specialized, such as senior government officials and policy-makers who seek a more general understanding of educational planning and of how it is related to overall national development. They are devised to be of use either for private study or in formal training programmes.

Since this series was launched in 1967 the practice as well as the concept of educational planning has undergone substantial change. Many of the assumptions which underlay earlier attempts to put some rationality into the process of educational development have been abandoned or at the very least criticized. At the same time, the scope of educational planning itself has been broadened. In addition to the formal system of schools, it now includes other important educational efforts in non-formal settings and among adults. Attention to the growth and expansion of educational systems is being supplemented and sometimes even replaced by a growing concern for the distribution of educational opportunities and benefits across different regions and across social, ethnic and sex groups. Educational planners and administrators are concerned to take a more systematic attitude towards their social responsibilities. They are learning to act as "conveyer belts" between the classroom (or any other place of learning) and the decision-maker, whether he be found at the local or regional level, at the head of a central department or institution, or in one of its various branches. Their concern is

two-fold: to have a better understanding of the reality of education, in its own specific dimensions, empirically observed; and to ensure better analysis and consideration of this reality so as to improve, where possible, the hypotheses that underlie educational policies and strategies for change.

One of the purposes of these booklets is to reflect this diversity by giving different authors, coming from a wide range of backgrounds and disciplines, the opportunity to express their ideas and to communicate their experience on various aspects of changing theories and practices in educational planning.

Although the series has been carefully planned, no attempt has been made to avoid differences or even contradictions in the views expressed by the authors. The Institute itself does not wish to impose any official doctrine on any planner. Thus, while the views are the responsibility of the authors and may not always be shared by Unesco or the IIEP, they are believed to warrant attention in the international forum of ideas.

Since readers will vary so widely in their backgrounds, the authors have been given the difficult task of introducing their subjects from the beginning, explaining technical terms that may be commonplace to some but a mystery to others, and yet adhering to scholarly standards. This approach will have the advantage, it is hoped, of making the booklets optimally useful to every reader.

Preface

The economic crisis of the 1970s and its ensuing consequences, euphemistically known as 'adjustment' measures, have had a gradually brutal impact on both productive and non-productive sectors of the economy. In some countries enrolment growth has been matched by a corresponding increase of central government budgetary resources. In most cases, however, expansion of the numbers of pupils and students has taken place—and is still occurring—at a pace considerably superior to the ability of States to mobilize the necessary funds to hire, train and support a full-time teaching staff, to produce or purchase textbooks and school supplies and to build and equip new institutions or maintain and develop existing ones.

The resulting disparity between 'demand-for-places' and the State's ability to provide them is not limited to quantitative shortages but affects the very learning process. As practically all available resources for recurring expenditures are directed at meeting the wage bill for teachers and as the wages actually received by them in real terms are being whittled down, pupils and students find they have neither the basic aids with which to learn nor the sustained presence of teachers and professors, who must seek additional income-earning occupations and are thus led to reduce correspondingly their contact-time with pupils and students.

This general deterioration of the 'quality' together with the unlikely expansion of State resources for education in the foreseeable future have become the centre of preoccupations by Governments, international agencies such as Unesco, lending

agencies and World Education Congresses. Both at the national and international levels, this situation has challenged decision-makers and all the actors involved in the educational planning process.

It was incumbent upon the International Institute for Educational Planning—directly responsible for training senior educational staff from all of Unesco's Member States—to include this universal issue in this Series of booklets, aimed at a wide audience. Basing itself on its own awareness and knowledge of the impact of 'adjustment' policies on education, IIEP requested Keith Lewin of the University of Sussex to follow up on a paper written for Unesco's Journal *Prospects* and attempt to assess the new responsibilities and roles of educational planners as they face the obligation to meet the social demand for, and the qualitative improvement of, education with diminished Government resources.

As the planning-process actors move from a state of relative resource availability to conditions of resource stagnation or regression they must learn to plan for austerity with frugality and imagination. Out of the multi-dimensional choices they face, and options they can propose to decision-makers, planners must devise new implementation strategies involving institutions, staff and resources stretching beyond the limitations of national budgets and the civil service.

Past expenditure trends and present resource pressures lead Dr. Lewin to assess the impact of austerity and to propose constructive responses open to planners capable of 'breaking the mould' of past conditioned reflexes. With this publication, IIEP pursues its mission of informing readers of the Fundamentals Series of key issues and challenges which each day shape the new dimensions of the planning process and also determine the new responsibilities of those who give it life, relevance and social significance.

Sylvain Lourié
Director, IIEP

Contents

I. Introduction 11

II. Trends in educational expenditure 13

III. Pressures on educational budgets 25

IV. The impact of austerity 54

V. Breaking the mould: constructive responses to austerity 88

VI. Conclusions 117

Bibliography 123

Acknowledgements

I should like to express my thanks to a number of people and institutions that enabled the production of this book. First my thanks go to Ken King of the University of Edinburgh, who first encouraged me in 1982 to start working on the themes developed here, and to the International Research and Development Centre in Ottawa that supported a conference paper for the 'Bellagio Group' of donors written with my two colleagues, Christopher Colclough and Angela Little. Subsequently the staff of *Prospects* commissioned a paper which led to the invitation to contribute to the Fundamentals of Educational Planning series. Eric Hewton at the University of Sussex provided much food for thought in his parallel work on planning in recession in the United Kingdom. Angela Little gave generously of her time and made insightful and detailed comments on the draft. Her support, as always, had a very special character. Thanks are also due to Bill Dodd, Hans Reiff, Hans Singer and colleagues at Sussex and the Institute of Development Studies who made helpful suggestions. Lastly, I must thank the International Institute for Educational Planning for the guidance offered by their staff members, and the special assistance provided by John Hall.

Falmer, Sussex, June 1986

I. Introduction

The economic and social conditions in which planning takes place have changed dramatically since the 1960s. In many of the countries of the North, political realignments have taken place where economic recession, greater defence spending and rising unemployment have contributed to more restrictive policies on public investment in education. In the South many, but not all, developing countries have experienced difficulty in responding to growing demand for universal enrolments at the first and second levels and expanded third-level provision. This has occurred at a time when the resources available to governments have been adversely affected by the knock-on effects of global recession. These have had particularly serious consequences for the poorest countries. Educational planning in these countries has been confronted with a new set of challenges to which it has been slow to respond. Significant growth in real terms in the resources available for public education cannot now be readily assumed. The emphasis has shifted towards the management of stable resourcing with little diminution in the growth of demand. In a significant number of cases economic contraction has produced a shrinking resource base, which planning procedures have adjusted to in fairly haphazard and unpredictable ways. Confidence in investment in education as a vector for development has waned, not so much amongst its clients, as amongst influential central planners and treasury officials seeking to reduce public-sector spending. Though growth in demand for educational services seems set to continue almost everywhere, there is little or no prospect of the available resources keeping pace.

Thus the task of the educational planner is now an extraordinarily difficult one—increasingly it is concerned with rationalization and choice between existing programmes that cannot all be financed, not with the allocation of additional resources to new projects. To make matters worse this is often taking place against a backdrop of infrastructural decay which compromises the gains in quality and access achieved during periods of growth.

This monograph explores the issues raised by the changing climate within which educational planning will take place in the years to the end of the century. Its focus is on the problems faced by countries hardest hit by recession and the need for adjustment to a changed economic environment. It has a number of specific concerns. The first, explored in Chapter II and Chapter III, is to chart recent trends in educational financing in developing countries, emphasizing the important differences that have emerged in the ability and willingness to allocate resources to education in different countries. Chapter IV discusses the consequences that are likely to follow from level funding and diminished resources for education and develops eight propositions that illustrate these. This chapter shows that austerity may bring with it unexpected changes. These are not simply those that might be anticipated from a reversal of growth patterns, and they have qualitatively different characteristics. Chapter V is based on a number of themes which provide the basis for planning educational provision in austerity. It includes a discussion of changes in organizational climate in conditions of parsimony and contraction; proposals for assessment of the room to manoeuvre that exists in educational policy; suggestions for the development of monitoring systems that can indicate the sensitivity of educational quality to changes in inputs; and a review of the options open to resist contraction in resources, increase the efficiency of delivery, and refinance provision from sources other than public expenditure. The concluding remarks synthesize the main findings and emphasize the central theme of protecting educational provision for the most vulnerable groups in developing countries that are most at risk from reductions in social-sector expenditure.

II. Trends in educational expenditure

There are many published studies that provide data on trends in the allocation of resources to education (e.g. Coombs, 1985; Eicher, 1984, 1985; Hicks and Kubisch, 1984; Lewin, Little and Colclough, 1982; Lewin, 1986*a*; Psacharopoulos and Woodhall, 1985; Unesco, 1985, 1983*a*, 1982; Weiler, 1983; World Bank, 1980*a*, 1980*b*). From these studies the most striking trends that will influence policy on educational provision over the next decade are:

1. A slow-down in the rate of growth of expenditure on education as a proportion of GNP in most parts of the world.
2. A tendency for the number of countries reducing the proportion of public expenditure allocated to education to grow.
3. A decline in unit costs and educational expenditure per inhabitant in many countries, especially those in Africa, coupled with an increased gap in real terms between public expenditure per inhabitant in developing countries and that in developed countries.
4. A tendency for non-salary recurrent expenditure to be contained at very low levels, especially in the poorest countries.

Changes in the allocation of resources to education over time by national governments are notoriously difficult to assess, for a number of well-known reasons (e.g. see Eicher, 1984). The quality of available data varies enormously in terms of their reliability, the time periods they cover, and the relationships between budgeted allocations and actual expenditures. Comparisons between countries and within countries are compromised by differ-

ent accounting systems and the idiosyncrasies of exchange rates. Some types of expenditure (e.g. on non-formal programmes and training courses) may fall outside the ministry of education and appear under a wide range of headings not easily identified. There are methodological problems relating to the aggregation of data and the statistical procedures used in computing averages. Nevertheless, the evidence for the trends identified appears with sufficient regularity for them to be worth detailing.

Gross national product (GNP) and educational expenditure

The amount of public expenditure allocated to education in the world has been rising throughout the last two decades. As a proportion of GNP, expenditure has also risen, though this growth slowed considerably in the late 1970s. The most recent Unesco study (Unesco, 1985) shows global increases in spending at current prices from US$158,783 million (1970) to US$626,949 million (1982). In developing countries these increases are from US$13,761 million (1970) to US$99,136 million (1982) and in developed countries from US$145,022 million (1970) to US$527,813 million (1982). The percentage of GNP allocated to education in the developed countries has increased from 5.9 per cent to 6.1 per cent, remaining constant from 1978 to 1982. Amongst developing countries this figure climbed from 2.9 to 4.1 per cent, with most growth between 1970 and 1975. It exceeded the 1977 level (3.8 per cent) only in 1982 (4.1 per cent). There are large differences between countries: the figures for Africa have fluctuated around 5.0 per cent; for Asia and the Pacific around 3.3 per cent; for Latin America and the Caribbean they have been rising to 4.4 per cent; in the Arab states they now exceed 5.0 per cent (as of 1982). The pattern of growth in the percentage of GNP allocated to education is shown in Table 1.

The general slowing-down in growth rates is clear. For the latest year available, 1982, there seems to have been some recovery but this is small in some regions, e.g. Africa, and is not established as a trend in which much confidence could be placed. There is not a long enough sequence of data and the most recent

Table 1. Public expenditure on education as a percentage of gross national product[1]

Region	1970	1975	1976	1977	1978	1979	1980	1981	1982
World[2, 3]	5.4	5.6	5.6	5.8	5.7	5.6	5.6	5.6	5.7
Africa[3]	4.1	4.8	4.9	5.1	5.1	5.0	4.9	4.9	5.2
America	6.7	6.0	6.0	6.7	6.5	6.4	6.3	6.2	6.4
Asia[2]	3.1	4.3	4.4	4.5	4.6	4.6	4.5	4.6	4.6
Europe and USSR	5.2	5.8	5.7	5.6	5.6	5.6	5.6	5.6	5.6
Oceania	4.3	6.2	6.2	6.4	6.1	5.8	5.9	5.8	5.9
Developed countries[3]	5.9	6.1	6.0	6.3	6.1	6.1	6.1	6.1	6.1
Developing countries[2]	2.9	3.6	3.7	3.8	3.7	3.6	3.7	3.8	4.1
In Africa	4.1	4.8	4.9	5.1	5.1	5.0	4.8	4.9	5.2
In Asia and the Pacific	2.3	3.2	3.4	3.5	3.3	3.2	3.3	3.3	3.6
In Latin America and the Caribbean	3.4	3.6	3.7	3.8	3.7	3.7	4.0	4.2	4.4
(Arab States)	5.0	5.9	5.5	5.5	5.4	4.8	4.6	4.5	5.1

1. Unweighted means.
2. Not including Democratic Kampuchea, Democratic People's Republic of Korea, Lao People's Democratic Republic, Lebanon, Mongolia and the Socialist Republic of Vietnam.
3. Not including South Africa.

SOURCE: *Public expenditure on education in the world: regional and country trends 1970–1982*, Paris, Unesco, 1985 (Reports/Studies STE/FIN/5).

figures are those likely to require adjustment as more data become available. These figures are unweighted averages and may be heavily affected by small numbers of countries. For example, Algeria, Egypt and Nigeria account for about 50 per cent of the total expenditure on education in Africa. Taking median values for each region (Unesco, 1985) does not change the observed trends significantly; however, doing this does suggest that in Africa the rise in 1982 was concentrated in a small number of countries, since the median value did not change when compared to 1981.

Real growth in educational expenditure has not been nearly as dramatic as increases in percentage allocation in the 1960s and 1970s might suggest. Inflation rates in low-income economies (as defined by the World Bank and excluding India and China) averaged nearly 14 per cent between 1973 and 1983 and reached 34

per cent in the upper-middle-income economies. Population growth rates averaged 2.9 per cent in the low-income countries, increasing the number of school-age children. Rates of GNP growth per capita between 1965 and 1983 averaged 0.7 per cent in the low-income countries and decayed at an average rate of 0.2 per cent in sub-Saharan Africa (World Bank, 1985). African countries experienced an average decline in GDP per capita of 3.6 per cent per year between 1980 and 1982, West Asia a decline of 7.5 per cent per year, and Latin America of 0.3 per cent with positive growth only in 1982 (Raj, 1984). These changes have tended to lessen the apparent gains from increases in the proportion of GNP allocated and have made actual allocations decline in some cases.

The figures on which these aggregate proportions are based vary according to which countries are included within the groups, and the methods used to arrive at aggregates. Individual-country figures may also be subject to correction and thus appear as different figures in different editions of, for example, the Unesco *Statistical yearbook*. Comparing two recent Unesco analyses makes this point clearly. The 1982 Unesco study on *Public expenditure on education in the world* presents a different picture from that of the 1985 study cited above. For developing countries as a whole and for Africa the respective figures are shown in Table 2.

Table 2. Percentage of gross national product allocated to public expenditure on education in developing countries and Africa, computed by Unesco 1982 and 1985

Region		1970	1975	1976	1977	1978	1979
Developing countries	Unesco, 1982	3.3	4.0	4.1	4.1	4.0	4.0
	Unesco, 1985	2.9	3.6	3.7	3.8	3.7	3.6
Africa	Unesco, 1982	4.3	4.8	4.9	4.7	4.6	4.6
	Unesco, 1985	4.1	4.8	4.9	5.1	5.1	5.0

SOURCES

Unesco, 1982: *Public expenditure on education in the world: regional and country trends 1970–1979*, Paris (Reports/Studies STE/FIN/4).

Unesco, 1985: *Public expenditure on education in the world: regional and country trends 1970–1982*, Paris (Reports/Studies STE/FIN/5).

Some of the differences in the developing-country averages may be attributed to the inclusion of China in the 1985 study, but this does not explain why the figures for Africa are different. The latter show in the 1982 study a decline from 1976, but only begin to decline in 1979 according to the 1985 study. Differences of this kind appear throughout the published studies and are often even more striking when data from different agencies are compared, as Eicher has observed in relation to public expenditure on education in Africa (Eicher, 1984). Comparing his own calculations, based on Unesco and World Bank data, with those from a World Bank study, and with the 1980 and 1981 Unesco *Statistical yearbooks*, he finds variations ranging up to 25 per cent between the figures for a given year for particular countries, suggesting the need for caution in basing policy conclusions on them.

Eicher's most recent work (Eicher, 1985, see Table 3) concludes that:

> In fact, of the total of 147 countries, 91 (i.e. 62 per cent) have continued to increase their effort by comparison with its level before the crisis, up to 1980, while 30 (i.e. 20 per cent) have reduced it. Since 1980, these proportions have altered markedly as only 64 countries (i.e. 44 per cent) have continued to increase their effort in absolute terms whereas 33 (i.e. 22 per cent) have reduced it and 50 (i.e. 34 per cent) have stabilized it.

Table 3. Breakdown of countries according to their absolute expenditure on education by region, 1974 to 1982/83

Region	1974 to 1982/83			1974 to 1980			Since 1980		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Africa	33	6	7	32	4	10	22	13	11
Latin America	20	7	6	22	5	6	13	10	10
Asia	22	7	7	20	7	9	21	12	3
Western Europe	9	6	3	10	6	2	4	11	3
English-speaking countries and Japan	2	3	1	3	2	1	1	2	3
Centralized-economy developed countries	4	1	3	4	2	2	3	2	3

(1) Number of countries that have *increased* their public expenditure on education by more than 20 per cent.
(2) Number of countries that have *maintained* their public expenditure on education at roughly the same rate.
(3) Number of countries that have *reduced* their public expenditure on education by more than 20 per cent.
SOURCE: Eicher, 1985.

> Among developed countries, the number of countries increasing their effort has fallen from 17 to 8 (out of 32), i.e. from 53 to 25 per cent; among developing countries, the fall is from 74 to 56 (out of 115), i.e. from 64 to 49 per cent. Since 1980 no region apart from Asia and Oceania has seen an increase in its effort among a majority of the countries composing it. The general tendency has been for a relative fall, and the majority group has been that in which the effort is stabilized.

It is clear that a considerable amount of work still needs to be done to establish with more accuracy what recent trends are. However, there can be little question that some systems have indeed suffered from stagnation and diminution in resource allocation. In the absence of convincing evidence to the contrary—and none of the published studies show sustained increases in resource allocation—it seems safe to conclude that there has been a general slow-down in growth.

Public expenditure on education as a proportion of total public expenditure

Analysis of the proportion of public expenditure that is allocated to education produces a somewhat different picture. One reason for this is that among countries which allocate the same proportion of their GNP to public educational expenditure there is a large variation in the percentage of public expenditure that this represents. Thus for example Mali spent 4.6 per cent of its GNP on education in 1978 and over 30 per cent of total public expenditure, whilst Guinea-Bissau allocated 4.2 per cent of GNP but only 13.1 per cent of public expenditure in 1979. This reflects the relative size of public expenditure and GNP. The trends that can be identified in proportions of public expenditure allocated to education do show similarities. Our 1982 survey (Lewin, Little and Colclough, 1982) showed that amongst 48 developing countries 23 increased their proportions and 25 reduced them between 1970 and 1979. Amongst a group of 13 industrialized market economies and East European non-market economies 4 increased their proportions and 9 decreased them. On average percentage allocations decreased from 16.1 per cent to 15.2 per cent, at a rate slightly less than the decline in industrialized countries

(the equivalent figures being 14.3 per cent to 13.1 per cent). Analysis of recent World Bank data shows that between 1972 and 1982 the majority of the industrialized market economies reduced educational expenditures as a proportion of their national budgets. Of 9 countries for which statistics were available (World Bank, 1985), 8 reduced their proportion and only 1 increased it (Australia). Amongst the low- and lower-middle-income countries 15 reduced expenditure and only 2 increased it. In upper-middle-income countries 8 decreased the proportion and 5 increased it (see Table 4). These observations are similar to the findings of other studies (e.g. Eicher and Orivel, 1980; Coombs, 1985; Coombs and Choudhury, 1981). These observations are similar to the findings of other studies (e.g. Eicher and Orivel, 1980; Coombs, 1985; Coombs and Choudhury, 1981).

Table 4. Numbers of countries increasing and decreasing the proportion of public expenditure allocated to education 1972–1982

	Increase	Decrease
Low-income economies (excluding China and India)	1	6
Lower-middle-income economies	1	9
Upper-middle-income economies	5	8
Industrialized market economies	1	8

SOURCE Compiled from World Bank statistical data, *World development report 1985*, Washington, DC, World Bank.

There is therefore consistent and compelling evidence that proportions of public expenditure allocated to education have been diminishing in a growing number of countries. This started first in the developed nations and is now found amongst developing countries.

Unit expenditure and increasing differences between countries

The shifts in growth rates explored above are reflected in the amount of public expenditure per inhabitant, which has shown a

downturn (Unesco, 1985). The 1982 figure in current US dollars was lower than for 1981 in developed countries ($ 459 compared to $ 465). The same pattern can be found in Africa ($ 36 compared to $ 37), and Latin America and the Caribbean ($ 98 compared to $ 106). Asia and the Pacific experienced no change ($ 18). Only the Arab states saw an increase ($ 131 compared to $117) as Table 5 shows. These aggregate figures conceal large

Table 5. Public expenditure on education per inhabitant (in US dollars at current prices)

Regions	1970	1975	1976	1977	1978	1979	1980	1981	1982
World	44	83	89	102	117	130	142	143	140
Developed countries	138	266	284	329	382	427	463	465	459
Developing countries	5	14	16	18	20	23	28	30	30
In Africa	7	19	21	25	29	32	38	37	36
In Asia and the Pacific	3	8	10	11	12	14	16	18	18
In Latin America and the Caribbean	20	44	49	52	59	72	91	106	98
(Arab states)	15	62	68	79	86	91	109	117	131

SOURCE: *Public expenditure on education in the world: regional and country trends 1970–1982*, Paris, Unesco, 1985 (Reports/Studies STE/FIN/5).

drops in expenditure per pupil in some countries. The World Bank (1984) quotes a Latin-American study showing that spending per primary student fell by almost 45 per cent in real terms between 1970 and 1978. Average real spending per student dropped between 1970 and 1978 from US$90.2 to US$50.2. At the same time the difference between countries increased, covering a range from US$10 (Peru, Haiti) to US$129 (Panama). At secondary level there was also a decline (from US$166 to US$81.8), as there was at tertiary level (from US$970.4 to US$361.2) (Heller and Cheasty, 1984). Unesco (1985) data show a recovery in expenditure since 1980 but it is not clear that these data have been computed on the same basis. Eicher (1985) indicates a 1 per cent increase in real spending per student at primary level in Latin-American countries comparing 1982 with 1974 (three out

of six countries have reduced spending in this study). In Africa public expenditure per pupil rose during the 1970s but has fallen since 1980 (Unesco, 1985). In five countries out of eleven which Eicher (1985) studied, expenditure per pupil was reduced from 1974 to 1982 (in one case by more than a half and in another by a quarter). Six of these countries reduced higher-education spending per pupil during this period. In Asia between 1970 and 1979 average annual growth rates in public expenditure at constant prices were negative in four out of thirteen countries; unit expenditure growth rates were negative in five countries (by as much as 19 per cent per annum in Sri Lanka) (Unesco, 1983*a*).

These reductions have to be seen in the light of the large differences within regions and the absolute levels from which reductions have been made. Asia and the Pacific is the lowest-spending region; Africa spends twice as much per inhabitant, Latin America and the Caribbean 5.4 times as much, the Arab states 7.3 times as much and the developed countries 25.5 times as much. Although the 'gap' expressed as a ratio between per capita expenditure in developed and in developing countries has diminished (from about 28:1 to 15:1 from 1970 to 1982 (Unesco, 1985), it has grown in value (from about US$130 to US$423). Moreover, the ratio of expenditure per student at primary level between OECD countries and the thirty-six poorest developing countries with per capita incomes below US$265 (1975 prices) increased from 14:1 to 50:1 between 1960 and 1977, indicating that this relative gap in provision was widening. This is very clear from data on central government expenditure per capita on education between 1972 and 1980 (World Bank, 1983), which shows no increase in constant 1975 US dollars for the low-income economies (excluding India and China) which remain at US$3, very small increases for lower-middle-income countries (from US$16 to US$17) and substantial increases for the upper-middle-income and some oil-exporting countries.

Unit expenditure at different levels varies considerably. In Africa (excluding Egypt), the ratio of primary to tertiary expenditure per pupil was nearly 1:59 in 1981, for most of Asia (excluding China) it was 1:4.2 and for Latin America 1:8 (Unesco, 1985). In some sub-Saharan countries the ratio can exceed 100 (World Bank, 1980*a*). Increases in enrolment rates at higher lev-

els may have substantial effects on overall unit costs where these ratios are high.

Changes in unit expenditure are influenced by changes in pupil: teacher ratios. If these increase, unit expenditure will fall, all other things being equal. In 25 out of 54 countries surveyed by the World Bank (1984) student: teacher ratios at primary level have risen during the 1970s. Seventeen of these were African countries, where class sizes now may exceed 60 (e.g. in urban areas of Malawi and Kenya) and in some reach numbers in excess of 100 (Tibi, 1987). In some areas the pupil:teacher ratio seems to have been declining: in East Africa between 1970 and 1982 the average class size dropped from 43 to 41 at primary level though it increased at secondary from 21 to 22 (Wolff, 1984). Since most expenditure is on salaries at the primary level, increasing pupil:teacher ratios is a potentially effective way of reducing expenditure. Where population growth rates are high, allowing pupil:teacher ratios to rise may decrease unit expenditure but may have no effect on total spending since any reduction is more than compensated by the increased numbers enrolled. Thus in Kenya the school-age population is likely to increase between two and three times before the end of the century (the population growth rate exceeds 4 per cent). Current expenditure of the Ministry of Education, Science and Technology (1985/86) is budgeted at 34 per cent of total public expenditure and one estimate suggests this would have to rise to over 60 per cent if current levels of unit costs were to be maintained and all children had access to eight years of primary schooling. In Pakistan public expenditure on education grew by 1.3 per cent per annum, at constant prices, between 1970 and 1979 but unit expenditure shrank at 4.9 per cent per annum as more children were enrolled.

Thus there is widespread and convincing evidence of dilution of the unit of resource available per pupil. Where growth rates in expenditure have been below that necessary to keep pace with increasing enrolments this has been inevitable. Some reductions may have been justified by increases in the efficiency of delivery but it seems unlikely that this is the primary cause of the reductions observed.

Non-salary expenditure

Wage and non-salary recurrent expenditure has also been diminishing in a number of countries. In Latin America spending on non-salary items as a share of total expenditure fell in eight out of ten countries between 1970 and 1978 (World Bank, 1984). This was true for all Latin-American countries studied by Heller and Cheasty (1984) at the tertiary level and for 83 per cent at secondary level for non-salary expenditure per student. This study did not compute figures for primary recurrent expenditures since they were assumed to be so small as to have little effect on per-pupil expenditure. In Chile (Foxley and Raczyinski, 1984) public expenditure on primary education increased by 0.6 per cent from 1970 to 1980, whilst enrolments shrank slightly as a result of a small decline in the size of the cohort and increased drop-out. However, non-salary spending in some areas plummeted. Breakfast/snack rations distributed were reduced 46 per cent between 1974 and 1982 and dinner/lunches provided were cut by over 50 per cent with implications for a deterioration in the nutritional status of marginalized groups of children and for continued attendance and school achievement. There is evidence that some African countries (e.g. Tanzania) have experienced severe reductions in support for non-salary expenditure to the extent that 'paper and text supplies—as well as other teaching materials—are well below half the 1977 levels' (Green and Singer, 1984). The unit costs of 'students' requisites' in Zambia, which includes texts and writing paper, have increased 72 per cent since 1980 though the actual government expenditure per pupil on this has diminished by 33 per cent. Capitation in Kenya is about oné pound per annum, a figure that has not been raised for ten years. This has to cover stationery, texts, equipment, maintenance, electricity and water bills and other services which are estimated to cost anything up to fifty times the capitation allowance. Bolivia, El Salvador, Ivory Coast and Malawi spend less than US$2 per child per year on classroom materials—less than 0.7 per cent of the Scandinavian figure (World Bank, 1984). In Malawi expenditure per pupil at primary level more than halved from 1971 to 1981. Non-salary unit costs (including private expenditure) at primary level are very low as a proportion of total costs in some countries: in the Congo they represent

between 2.5 per cent and 3.5 per cent of total unit costs; in Nepal about 4.7 per cent (Tibi, 1987). In practice, a substantial number of primary schools in the poorest countries have no non-salary recurrent money except that which they can generate themselves. The scarcity of resources has also resulted in freezing of posts in the establishment (e.g. in Lesotho) and the curtailment of supervisory and visiting programmes (e.g. in Kenya).

In summary

Trends in educational financing illustrate how serious the problem of sustaining provision is becoming in some countries. Though there are examples of countries where educational budgets have continued to grow the number of these seems likely to decrease. Even the buoyant economies of the newly industrialized countries (NICs) around the Pacific rim have not been entirely immune from the effects of global recession. Educational planning under conditions of stable or diminished resourcing needs to proceed in a different manner from that under the conditions of growth which were widespread during the 1960s. The next chapter identifies the pressures which have led to the need to plan with austerity in mind.

III. Pressures on educational budgets

A simple model

There are two main types of constraint which limit the educational resources allocated by governments. First there are those that affect the overall levels of public expenditure and therefore the size of the cake from which the educational budget is sliced. They determine the ability to resource. Second there are those that affect the priority that is accorded to education in the national budget and which reflect internal decisions on resource allocation. These determine the willingness to resource. The distinction between ability and willingness is not simple and clear-cut but it is useful to begin an analysis using these broad categories.

A simple representation of the main dimensions of resource allocation is shown in Figure 1. The two general types of constraint are not completely independent. Factors appearing in one column may under different circumstances appear in another: thus loan conditionality may affect the ability to resource; it may also influence willingness by acting on the climate for decision-making within a country. Many factors have both positive and negative forms. The way they are displayed here reflects their disposition in countries currently suffering most from austerity. Since the primary concern here is with educational planning in austerity this discussion concentrates on factors which tend to diminish ability and willingness. There are pressures which work in the opposite direction and these will be explored in relation to willingness, as it is here they are most significant—their consid-

ABILITY		WILLINGNESS	
Increasing	**Decreasing**	**Increasing**	**Decreasing**
Lowering unit costs	Global economic recession	High population growth	Increasing educated unemployment
Expanding the taxation base	Declining trade volume/value	Increasing social demand	Migration of educated
Attracting more aid	Escalating energy costs	Interest-group pressures	Qualification escalation
	Exchange-rate pressures	Incremental upward drift in salaries	Declining school quality
	Domestic inflation	Continued manpower shortages	Inequitable provision
	Increased debt reservicing	Pressure for equitable access	Disillusion with productivity gains resulting from more education
	Loan conditionality		
	Restricted aid flows		
	Increased intersectoral competition		

FIGURE 1. *Ability and willingness to finance educational development*

eration in terms of ability requires an economic analysis outside the scope of this paper. At the end of this chapter a more sophisticated model is suggested that can be of use in understanding how factors interrelate and are perceived by different groups with an input to the planning process.

Ability

Considering first the factors that impinge most on the ability to resource educational development, global economic recession has had at least four major types of impact on developing-country economies. These are: reductions in international trade, increases in debt, the growth of conditionality, and reductions in official development assistance (ODA).

International trade. Recession has reduced the demand for imports from developing countries in the industrialized countries.

Terms of trade have worsened as the international market has stagnated. Recovery has been far more sluggish than after the first 'oil shock' in the mid-1970s. Global international trade suffered strikingly after 1979: exports grew by 1.5 per cent in 1980, stagnated in 1981 and declined by an estimated 3.6 per cent in 1982. Commodity prices, after adjusting for the rise in cost of imported manufactured goods, reached their lowest value since 1945 in 1982 (World Bank, 1983*a*). Non-fuel primary producers suffered a decline in the terms of trade throughout the last decade and, although benefiting from falling oil prices since 1982, have not generally been able to make up the ground lost. Though dependence on primary products has declined, a substantial minority of developing countries (particularly in Africa) are still very vulnerable to fluctuations in the value of one or two commodities. Zambia, which is heavily dependent on copper exports, has seen the value of this commodity reach a historic low for this century. Real income per capita has declined by 60 per cent since 1974 and government expenditure per capita fell between 1975 and 1979 by 75 per cent and 35 per cent in capital and recurrent respectively. By 1983 recurrent expenditure had dropped by a further 15 per cent over 1979 levels (Green and Singer, 1984). The number of countries in which per capita GDP output fell from one year to the next increased from 15 in 1979 to 30 in 1980, 42 in 1981 and 51 in 1982. About two-thirds of these countries are African (excluding the oil exporters) and most of the remainder are in Latin America and the Caribbean (Raj, 1984). Relatively few Asian countries have suffered contraction of this kind, though growth has slowed dramatically in a number, e.g. Singapore and Malaysia.

Less-direct effects concern the increasing capital intensity of production. This may limit employment growth and the taxation base available to support public expenditure. Associated changes in production technology tend to reduce the labour-cost element of products to levels where this becomes a small proportion of the total costs. Growing protectionism and the use of industrial robots increase the advantages of manufacture in high-cost economies where the major markets are. The cheap labour costs of many developing countries are then less of an incentive to locate production there for export.

Debt. High interest rates and the importance of the foreign-exchange component of development programmes have increased the burden of debt in many countries. The move to much greater proportions of flexible rate loans has increased sensitivity to changes in interest rates, which have remained at historically high levels. Reductions in export earnings and the high cost of importing energy put pressure on the balance of payments in many countries after 1979. As interest rates rose in industrialized countries, debt-reservicing obligation grew and interest payments increased by 50 per cent between 1980 and 1982. Loan repayments therefore began to pre-empt large proportions of expenditure. Thus Malaysia announced M$4.5 billion cuts in public spending in 1983/84 partly as a result of seeing its debt servicing grow to unprecedented levels of M$2.8 billion. In 1986 this exceeded a fifth of all public expenditure. In Thailand debt reservicing now takes a greater proportion of the national budget than does education. Latin-American countries are still immersed in the worst economic crisis since the 1930s, despite the weak recovery since 1984. GDP per capita was 9 per cent lower in 1984 than 1980 and is similar to that nearly a decade earlier. The large decline in bank lending which has accompanied the increase in risk associated with the possibilities of defaulting has exacerbated the problems (Griffith-Jones, 1986). The rush of countries rescheduling their debts to ease payment burdens indicates the magnitude of the problem (from 1976 to 1979 there were eighteen reschedulings, from 1980 to 1983 there were sixty-six (World Bank, 1984); in 1984 there were thirty-four multilateral debt renegotiations, indicating that the trend was still upwards (World Bank, 1985)). There has been a dramatic reversal in the direction of the transfer of resources in some developing countries. Since 1982 Latin America as a whole has become a net exporter of financial resources. Between 1982 and 1984 these negative transfers (equal to net capital inflow minus net payment of profits and interest) have totalled around US$75 billion, representing about 25 per cent of the region's total exports during this period (Griffith-Jones, 1986). Recently (September 1985) even the United States became a net debtor country with borrowing exceeding assets for the first time in many decades.

The prospects for improvements in indebtedness depend on a

range of factors, which include monetary–fiscal balance (primarily a reduction in budget deficits in major industrial countries, which should cause interest rates to drop and the exchange value of the US dollar to weaken); labour-market policy (to reduce high unemployment and its costs in industrialized countries whilst restraining the growth of labour costs to modest levels; and protectionism (where real growth in industrialized countries might lessen the tendency for restricting access to these markets to developing-country exports). If assumptions favourable to the developing countries are made (World Bank, 1985) the main indicators of indebtedness would improve with debt-service ratios falling from about 20 per cent to 16 per cent from 1984 to 1990 for all developing countries, though it would continue to increase in low-income Africa. If unfavourable assumptions are made, average debt-service ratios will increase to 28 per cent, with low-income Africa and most oil exporters reaching levels of 36 per cent or more. This would undoubtedly increase the need for rescheduling and pressures for what the World Bank calls 'involuntary' lending (World Bank, 1985).

Conditionality. The third factor, 'conditionality' on loan finance, has favoured tight control of public-sector spending. It has emphasized balancing current accounts as a pre-condition for assistance. The external climate, in which loans and development assistance are provided, has changed in ways consistent with the shift in political complexion of major industrialized countries. Domestic policy has sought to contain inflation and control public-sector borrowing (though not always successfully, as in the case of the United States). At the same time state controls on economic activity have been liberalized and the importance of 'getting the prices right' through market mechanisms has been argued repeatedly. Privatization—the sale of assets in state ownership—has become a major feature of economic policy in the United Kingdom and has its advocates in the current administration in the United States. This can produce very large one-off injections of money, and thus reduce the public-sector borrowing requirement in a given year. However, it has been opposed by those who argue that future cash flow from profitable assets (which are the most saleable) is being sacrificed, and that many utilities in public ownership can only become regulated mono-

polies in the private sector. In the words of Lord Stockton, a Conservative prime minister in the United Kingdom in the 1960s, it is 'like selling off the family silver' to meet recurrent commitments.

These shifts have been reflected in conditions attached to major loans and structural adjustment programmes. A number of countries borrowed heavily in the early 1980s to finance internal public-sector deficits (to the extent that in some cases these exceeded 10 per cent of GDP). Stabilization and reductions in external finance have forced cutbacks in public-sector spending and have often been accompanied by accelerating inflation, which has eased the burden by increasing the inflation tax. There is still considerable debate, however, about how best to respond to short-term pressures to reduce deficits without irreversible damage to infrastructure with long-term investment cycles. As the World Bank (1984) observes:

> ... a decline in spending on education and health detracts from building human capital, while less spending on infrastructure may damage a country's growth potential in the medium term. These effects may indeed outlast the resolution of the current debt problems....

Aid. Finally, recession has brought with it constraints on the levels of official development assistance (ODA). Total volumes of ODA from OECD countries reached a high of US$27,265 million in 1980 and fell back in 1981, improving to US$27,531 million in 1983. OPEC contributions shrank substantially from US$9,690 million in 1980 to US$6,804 million by 1982. The decline in some major donors was particularly marked—in the United Kingdom from US$2,156 million in 1979 to US$1,601 million by 1983—though most maintained their levels in real terms except in 1981. The dollar value of the various types of ODA has stagnated or fallen in total (World Bank, 1985) averaging 0.35 per cent of donor GNP. The World Bank (1980) estimates that about 9 per cent of the total education budgets of the developing countries are covered by external aid. Significant numbers depend for well over half (and some as much as three-quarters) of their budgets on some form of external assistance. In a study of sixteen West African countries (Eicher, 1984), the bulk of investment in educational facilities was paid for by foreign aid

in five countries and formed a substantial element in most of the remainder. In many of the francophone countries more than 50 per cent of staff at secondary and higher education level were expatriates. The domestic share of costs for expatriates may well exceed the total costs of local staff were they obtainable (Eicher, 1984).

Within the total there has been a shift in emphasis: from 1960 to 1978 the proportion of multilateral ODA increased from 13 per cent to 32 per cent and then began to fall (to 28 per cent by 1983). Bilateral disbursements of aid to education reached a high of US$3,394 million in 1980 and subsequently dropped back, recovering to US$3,200 million in 1984 (OECD, 1985). There are large differences between donors. Norway, Sweden and the Netherlands allocate more than 0.8 per cent; the United Kingdom, the United States and Japan less than 0.4 per cent. Recipients also benefit in very uneven ways. Bilateral ODA reflects strategic interests, historic ties and a range of non-developmental factors. It is concentrated amongst richer developing countries: 40 per cent of the total went to countries with a 1980 per capita income above $600 and only 33 per cent to those with per capita incomes below $410 in 1981. Sixty per cent of the bilateral ODA to the richer group went to only ten countries (Garcia-Thoumi, 1983). Net official flows to low-income countries have been 'crowded out' by rescheduling packages to richer developing countries and the poorest received lower nominal net official flows in 1983–84 than in 1979–80.

Aid disbursements do have a special value where there are foreign-exchange shortages, lacunae of expertise and training opportunities that cannot be met through any other route (Colclough, Lewin and Oxenham, 1985; Weiler, 1983). The OECD (1984) argues that '... foreign aid ... represents one of the few possible sources of increased resources for basic education'. The prospects for any increase in aid disbursements do not seem very encouraging (Eicher, 1985). Some have argued that as the economic, budgetary and political environment has become increasingly difficult donors have begun to suffer from 'aid fatigue'. This is a feeling that current levels are already sufficient and that efforts to redress domestic problems should take priority (Garcia-Thoumi, 1983). The World Bank (1985) also takes a pessimistic view:

> Current trends, however, point to (a) a substantial drop in net capital flows to low income countries because of a stagnation of gross flows in nominal terms and the substantial growth in debt service, and (b) a continuing overall stagnation in assistance levels or at best a small increase. As a result many developing countries may face an undesirable choice; either they try to borrow more from commercial sources, running the risk that their debt servicing burden will become unsustainable, or they retrench even more, creating further economic dislocation, losing the opportunity to make better use of their existing resources, and by cutting investment harming their long term economic potential.

In conclusion. From this analysis it can be concluded that the ability to finance educational development programmes has been significantly curtailed in many developing countries. Pressures on national economies have, at best, limited economic growth rates to modest levels and, at worst, have substantially reduced the real amount of resources available to public-sector programmes. Since education is usually amongst the largest of these it may be particularly vulnerable.

Willingness

The willingness of governments to allocate resources to education over the last decade has changed as their ability to finance it has diminished. Some factors are under a much greater degree of domestic control than others. It is these that will be discussed in relation to willingness. These factors can be divided into those which discourage and those that encourage expansion. There are at least six common developments of the first kind. These are:

Increasing unemployment of the educated.
Migration of educated manpower.
Qualification escalation unrelated to job skills.
Decline in school quality; undue emphasis on certification.
Increasing inequalities in provision.
Uncertainty about the contribution of education to increased productivity.

Educated unemployment. Educated unemployment has become common in countries where educational outputs have grown at rates in excess of the growth in the economy. There are some similar patterns, though experience differs widely. Enrolments at secondary level expanded rapidly after independence in many countries. This was necessary to replace expatriates and extend opportunity. Since the numbers of expatriates were usually small they were replaced rapidly. An overshoot in output was then inevitable as far as modern-sector job opportunities were concerned unless employment grew at unrealistically high rates. 'Queueing' became a well-documented phenomenon in some of these labour markets (see e.g. Blaug, Layard and Woodhall, 1969). The length of time of job search increased and post-graduation unemployment in secondary and tertiary education grew. Some studies began to show that it was secondary-level graduates who were most likely to be unemployed (e.g. Turnham and Jaeger, 1971) but it was not long before tertiary expansion, particularly in the relatively cheap liberal arts and humanitities subjects, created similar problems at higher levels. Deeper analysis tended to show that long-term rates of unemployment were not higher amongst the educated if appropriate corrections were made for the length of time of job search. Frequently high-level graduates tended to downgrade their job expectations as time passed and they then displaced those with lower levels of qualification. Nevertheless, 'unemployed' educated youth were widely seen as a political embarrassment, frustrated in their ambition, poorly utilized despite the investment of the state in their education, and a source of social unrest. Thus for example the insurrection in Sri Lanka in 1971 was firmly attributed by the government to educated youth who were unemployed, and as the then minister observed: 'The devil finds work for idle minds and we saw the results of this last month' (*Ceylon daily news*, 1 June 1971). In Zambia there were similar concerns during the 1970s that expanded educational provision was not producing attitudes and skills conducive to self-reliance and national development. Rising educated-youth unemployment precipitated a review which culminated in the educational-reform proposals of 1978.

The basic arithmetic of youth unemployment makes salutary reading and illustrates how serious educated unemployment was

becoming through the 1970s. There are many reports and studies that explore this which need no further comment here (e.g. Blaug, 1973; Colclough and Hallak, 1976; Dore, 1975; International Labour Organization, 1971, 1972, 1974; United Nations Economic Commission for Asia and the Far East, 1974). Structural features of employment and educational provision are present in many countries that tend to increase the aspiration/opportunity gap (International Labour Organization, 1976; Lewin, 1981; Little, 1978) which is a root cause of mismatches between supply and demand. These mismatches may be inevitable where population growth rates are high and enrolments expand in a way more closely related to population than the growth in modern-sector employment.

Growing imbalances of supply and demand need interpreting with some caution. They do not in themselves imply that a proportion of the population is being 'over-educated', except in a very narrow sense. They do not take account of qualitative changes in the labour force that may result from higher levels of educational achievement. They do not recognize the satisfaction of need which educational achievement itself represents. They beg many important questions about how 'unemployment' is assessed when it is intimately connected with labour-market rigidities which limit mobility and flexibility, and undermine simple theoretical assumptions based on notionally perfect markets. Nevertheless over-production does have an opportunity cost and it is this which forms the basis in some countries for less willingness to continue expansion.

Migration. During the 1960s and 1970s many developing countries experienced outflows of educated manpower. This started with flows of professionals to the United States and the ex-colonial metropolitan countries. It was driven by the attractions of high salaries and opportunities for advancement that eclipsed those available domestically. Estimates of the magnitude of these flows are sparse, not least because of the problems of deciding how much migration is temporary and how much is transitionary or permanent. Those available suggest that from the early 1960s to 1972 3,200 scientists, engineers, physicians and surgeons migrated to the United States from Africa, 1,300 went to Canada and 10,200 to the UK (International Labour Organiza-

tion, 1976). Much greater flows came from the Indian subcontinent and the rest of Asia where there was a reservoir of high-level manpower. The number of migrants was large enough to make a significant impact on the rate of growth of the small stock of professionals in most African countries during this period (Bennell and Godfrey, 1978).

Global recession and increasing unemployment in industrialized countries has lessened demand and has hastened the introduction of restrictive immigration controls. Increased migration to the oil-rich countries of West Asia during the 1970s partly compensated for this but the flow has now slowed to a trickle. The temporary migration of skilled and semi-skilled workers from developing countries grew very substantially from a small base during the 1970s (assembly-line workers in European countries, construction workers and domestic staff in West Asia) to provide dramatic contributions to national revenue in some countries through repatriated earnings (repatriated earnings to Sri Lanka from West Asia in the late 1970s were second only to tea as a source of foreign-exchange earnings). In Kuwait alone there were approximately 160,000 foreign workers in 1977 from ten main developing-country sources of whom about 7 per cent were professionals, 14 per cent semi-professional and 44 per cent in skilled and semi-skilled occupations (Birks and Sinclair, 1978). These flows have also reduced recently.

It is not simple to decide whether the kind of migration described above should be regarded as grounds for restricting further national investment in educational provision. There are several dimensions to the problem. Though migration may represent a loss to the manpower base within a country this may be temporary and it may be compensated for through repatriated earnings in scarce foreign exchange. This represents a return on the educational investment which the state has made and which it can recover through taxation and foreign-exchange controls. Where unit costs are high, e.g. in training doctors, costs are unlikely to be recovered in this way. The subsidy of potential migrants by the state can be seen as a cost which should properly fall on individuals or the economies of countries to which they migrate. Various kinds of bonding to government service and penalty payments for early release have been used to ensure repayment of the expenses of training. These arrangements are

difficult to enforce and apply fairly. Arguably, punitive measures to prevent migration may be counter-productive if they have an adverse effect on morale and motivation (Godfrey, 1976). Transfer payments between governments seem politically implausible. Where significant migration continues to drain cadres of scarce manpower it is likely to erode the willingness to support public education.

Qualification escalation. Qualification escalation refers to the tendency of employers to increase the educational requirements for jobs independently of changes in job content. Escalation of this kind is widespread and can be seen in both developed and developing countries. It is apparent from surveys of job advertisements over time and from changes in the schedules of correspondence used by manpower planners to relate the amount of schooling needed for different types of jobs. There are many countries where the basic qualification for low-level clerical jobs in government service has risen from completed primary to completed secondary education (and some where graduates from tertiary level enjoy an advantage) without significant changes in job description. Similarly, private-sector employers have chosen to respond to saturated labour markets by increasing the minimum educational qualification simply to reduce the number of qualified applicants. The use of educational qualifications as a convenient screening device has become widespread (Dore, 1976*b*).

These practices are quite rational in the competition for the best-quality labour at the lowest cost. From an economic point of view, however, escalation has the effect of raising the cost to the state of providing different types of manpower. If educational qualifications are used merely to screen out excessive numbers of applicants rather than certify general or specific competencies they are an expensive form of selection. University graduates with sixteen years of schooling employed as low-level clerks may perform jobs more efficiently; they may also be paid no more than a secondary-school graduate. They have undoubtedly cost more to educate than predecessors with secondary or primary education. If substantial productivity gains are not evident then, from a national accounting point of view, qualification escalation has increased costs without commensurate benefits, the

more so if remuneration is linked to educational qualification rather than performance. The neo-classical economist's response to this would be to argue that in the long run employers would realize that higher levels of education were not necessary for job performance and individuals would cease to forgo income to acquire it. But the fallacy here is to suppose that rationing through an imperfect market can take place in this way. Bureaucratic organizations, particularly in the public sector, have long become accustomed to using educational qualifications to ration access and legitimate differences in rewards that cannot readily be defended on productivity grounds. Deeply entrenched normative traditions reinforce the view that educational achievement should be rewarded by access to the more desirable jobs in the modern sector. Moreover, educational qualification is not a smoothly graded linear variable which changes incrementally—particular levels often assume inordinate importance (hence the bunching of enrolments around key selection points as repeaters swell a particular grade) and represent watersheds of access; the amount of schooling conveys different messages in labour markets that differentiate between where those years of schooling were spent.

Thus considerations of social status, legitimation and the allocation of opportunity on non-economic criteria must be understood to explain why escalation occurs. The individual response to escalation—that of increasing the motivation to acquire more education—represents a rational calculus of maximizing individual opportunity. Collectively this may merely redistribute jobs in favour of the most educated whilst increasing the social cost of the selection. This can be used as an argument for restricting expansion of educational provision through undermining willingness to fuel further escalation.

School quality and the 'diploma disease'. A recurrent theme is that quality has suffered as systems have expanded rapidly and the unit of resource per pupil has tended to be reduced. Even where unit expenditures have been maintained many other indicators seem to suggest that quality has diminished. These indicators include declines in: examination results; relative numbers of qualified teachers; teachers per pupil and per class; the frequency of school visiting and supervision; the availability of

textbooks; satisfaction amongst parents; transition rates from one level to the next. Many recent publications of the World Bank and other multilateral agencies, as well as streams of official reports, academic articles and internal inspection reports and educational reviews undertaken by ministries of education display a concern for declining quality (e.g. Coombs, 1985; Lewin, 1985*b*; Papua New Guinea, 1983; Unesco, 1984; World Bank, 1980*b*, 1983*b*). While some judgements derive from false beliefs of a 'golden age' of higher quality schooling in the past, much of the evidence cannot be dismissed in this way. Beliefs, in any case, are as important as real evidence of declining quality when willingness is being discussed.

A compelling line of reasoning which has been extensively researched (Dore, 1976*a*; Lewin, 1981; Oxenham, 1984*b*) attributes a major reason for declining school quality to the overemphasis on learning in order to pass examinations. This, it is argued, displaces learning more broadly defined for purposes other than selection. Where modern-sector jobs are scarce and desirable and where access to them is controlled by formal qualifications it is not surprising that schooling becomes orientated towards certificates. The competition for examination passes becomes intense and knowledge, skills and attitudes that do not contribute to success are devalued. Backwash from examinations on the curriculum influences teaching and learning, and encourages an instrumental view of knowledge. Learning to *get* a job tends to replace learning to *understand* and learning to *do* jobs. The experience of the majority of children becomes one of selection out of the school system. Much of what they have tried to learn has been of doubtful relevance to the occupations they enter and their self-esteem has been undermined by the experience of failure. Even the successful may have been socialized into extrinsically motivated learning which values narrowly defined examination performance over the knowledge, skills and attitudes needed to contribute creatively to development. The 'examination hell' extends from Japan to Sri Lanka and many developing countries have seen the explosive growth of cramming schools to provide additional opportunities to study for crucial examinations.

For some, the pathology of the 'diploma disease' is an argument for limiting access to poor-quality schooling. But this is no

real solution, since the root causes lie elsewhere. It also neglects the opportunities that exist to use the public examination system as a lever for change and as a monitoring system to improve school quality (see e.g. McNamara, 1980; Somerset, 1982). There is considerable scope for the simultaneous development of curricula and examining systems where high-quality assessment instruments reinforce curriculum goals rather than undermine them (Lewin, 1980; Little, 1984*a*).

Inequality. Differences within school systems in provision can be great. The proportion of schools which are successful in terms of the educational objectives set for them is often very low. Performance on public examinations and transition rates to the next level are the most easily available indicators of this, though both have their drawbacks. There is evidence from Kenya, Malaysia, Sri Lanka and many other countries of the development of 'action' and 'façade' educational sectors: the former contain high-cost, well-organized and efficient schools where the bulk of students demonstrate useful learning and many progress to the next level; the latter low-cost, poorly organized schools with irregular attendance and inefficient use of resources where few students demonstrate useful achievement or are promoted to the next level (Lewin, 1981; Somerset, 1982). Achievement differences between schools can be dramatic. In Malaysia some schools achieve close to 100 per cent pass rates in integrated science at Grade 9 level, others have a majority of candidates scoring close to random-guessing levels on a multiple-choice examination taken after three years of instruction (Lewin, 1984*a*). Transition rates from secondary into pre-university classes have a wide dispersion in Sri Lanka. There is also some evidence that the curriculum changes introduced in the 1970s disadvantaged rural secondary schools. These were much slower to adapt to a new examination; transition rates between levels in the well-founded urban schools improved at the expense of those on the periphery (Lewin, 1981). Differences between schools are far too great to be explained by characteristics of school intake. There is a growing weight of evidence to support the view that it is variations in school-quality factors that explain much of the variation in performance observed (Heyneman, 1976; Rutter, 1980; Somerset, 1982).

Expansion of school systems has also been justified on the basis that it will contribute to reductions in income inequality. If educational qualifications are more widely distributed, so the argument goes, then jobs (and the income associated with them) will also be more widely distributed. Some governments (e.g. Malaysia) have consciously attempted to use educational provision to redress imbalances in participation and rewards in the labour market, with some success—though in the Malaysian case the success in increasing *bumiputra* (essentially Malay) participation is partly offset by increasing income inequality within the Malay community. In Malaysia, as elsewhere, educational subsidies have tended to favour the relatively wealthy—the richest 20 per cent of households receive sixteen times as much public-education spending as the poorest 20 per cent on post-secondary education; in Colombia the richest receive forty-six times as much for university education as the poorest—demonstrating that it is the children of the wealthy who benefit most from free-education policies (World Bank, 1980*a*). Fields (1980) has summarized research on income distribution and education producing a mixed picture of results. Carnoy *et al.* (1982) conclude that reducing the variance of educational investment in a population is positively related to reducing inequality in earnings distribution. They note, however, that changes in the reward structure in employment have a far greater impact on earnings distribution than do changes in the distribution of schooling (see also Carnoy, 1980). Leaving aside the methodological criticisms of studies of education and income distribution (see Lewin, Little and Colclough, 1982) it is worth noting that Jallade's studies (1977, 1982) in Brazil show that high-income well-educated groups enjoy better educational opportunities and tend to have a higher rate of return on their investment in education. Educational provision is therefore unlikely of itself to reduce income inequality considerably. Simmons and Alexander (1980) also reach the conclusion that educational expansion has 'served to increase rather than decrease income inequality'.

The apparent failure of increased access to schooling to reduce income inequality is intimately connected with differentiation within that access. It may be that though more children have access to schools the relative differences between schools have increased rather than diminished, with 'façade' schools forming

a larger proportion of the whole. Systems which retain the characteristics of sponsored rather than contest mobility (Turner, 1958) are unlikely to have significant impacts on income inequality. If expanding educational access has little direct effect on income inequality as a whole then this, as a rationale for further investment, cannot be argued with conviction.

Education and productivity. It is central to human-capital theory that not only are the more educated rewarded with greater remuneration, but that this is justified by higher productivity. There is a long history of attempts to demonstrate this and several surveys are available of the evidence on the link between educational level and agricultural productivity, modern-sector productivity, and urban traditional-sector productivity (Berry, 1980; Colclough, 1980; Hallak and Caillods, 1981; Little, 1984*b*; Lockheed, Jamieson and Lau, 1980).

Our recent review (Lewin, Little and Colclough, 1982) suggests that agricultural productivity is enhanced by raising the educational level of farmers if a supportive infrastructure exists. In the modern sector the evidence is more equivocal, with both positive and negative findings. This may be attributed to a whole range of methodological problems: generally almost all modern-sector workers have at least primary education and it is not therefore possible to separate out the independent effect of this; the majority of jobs require general rather than specific qualifications in mixtures that make comparison difficult; crude measures of educational level by the number of years of schooling belie the variations in school quality which may completely overshadow differences in productivity; measuring productivity is a considerable problem outside the confines of production line work, when it is difficult to distinguish the contributions of different workers.

Similar problems exist with studies of education and productivity in the urban informal sector, which provides considerable employment in some developing countries. A recent review of education and entrepreneurship (Hallak and Caillods, 1981) was unable to find clear relationships between educational level and productivity. There is some suggestion (Arye, 1977) that threshold effects may operate in manufacturing enterprises in the informal sector in Ghana. Here heads of enterprise with middle-level

education ran more productive businesses than those with less, but the effect was not significant for higher education. Studies of the informal sector distinguish between the contribution education can make to finding work, to creating new job opportunities and to improving the performance of those who work in this sector. Most attention has been focused on the first two categories rather than the last. Exhortations are common about the value of practical skill training to prepare pupils for self-employment (see King, 1985*b*, for a selection of official statements from Commonwealth countries on this theme) but these rarely reflect deep understanding of the skill needs and work patterns of self-employed artisans (see e.g. King, 1977, 1985*a*) or the realities of non-formal training for employment of this kind (Hoppers, 1984).

Labour-market segmentation theory has introduced important additional perspectives into the determination of incomes. It suggests that the higher earnings of the more educated may be only partially the result of increases in their educational level and are perhaps more a form of monopoly rent (Carnoy, 1980). A segmented labour market in its simplest conception consists of:

1. A primary independent segment: jobs that require creativity, self-initiation, internalized norms and are dependent on specialized and complex skills that cannot be learned repetitively and that are associated with higher education and high salaries.
2. A primary routinized segment: jobs that require routine performance, dependability, stability, acceptance of authority and externally set goals and that can be learned through practice and experience; and that are associated with significant formal education and average wage levels.
3. A secondary labour market: jobs that require a limited range of skills that can be learned with a minimum of on-the-job training, that do not change with experience, that are often irregular and unstable and are poorly rewarded.

In a refinement of this Carnoy (1980) differentiates 'high education', 'unionized' and 'competitive' segments, roughly equivalent to these three and distinguished in the first instance by the educational backgrounds of employees. Within these segments Carnoy argues that there are positive relationships between education and productivity but between the segments the relationships

between earnings and education may be very different. In essence this arises from the different organization of labour within segments: competitive-segment workers are relatively powerless in bargaining and the surplus that they generate through increased productivity is captured by those in the high-education segment. The incremental scales, seniority promotion systems and stable employment of the unionized segment guarantee higher lifetime incomes than competitive-segment workers and pay responds only loosely to individual productivity differences. The existence of dual and segmented labour markets has been challenged (Cain, 1975; Psacharopoulos, 1981; Wachter, 1974) and there are undoubtedly difficulties in applying it to low-income economies. On the other hand it does draw attention to serious problems that neo-classical theory has when orthodox analysis is applied to labour markets that are very far from being unified or free of rigidities and manipulation by interest groups whose motives are unlikely to be purely economic.

Belief in the productivity gains associated with increased educational levels in the labour force has been eroded by the mixed results of research. Direct, linear relationships do not seem to exist. There still is a convincing case that can be made in some areas of employment that education can improve productivity, but there are still many unresolved questions. The issues are complex and reliable data often difficult to assemble. This may encourage some diminution in willingness where other factors combine with uncertainty over productivity gains to create a climate hostile to expanding educational provision.

Countervailing pressures

There is another set of factors which, by and large, have acted to increase levels of investment. These include:
Growing social demand coupled with population growth.
Continued manpower shortages.
The power of interest groups.
The ideology of free and universal provision.

Growing social demand and population increases. There are several aspects to this. First, educational expansion contains within

it a motor for increased social demand. Expanding primary enrolments increases the pressure on the selection ratio into secondary and higher levels. If these ratios are not to fall, growth rates at higher levels must be greater than at lower levels since absolute numbers are largest in the first cycle. Second, primary expansion reduces the scarcity value of primary-school graduates and shifts attention to the next cycle of schooling as that most critical for access to the modern sector. Few countries have been able to resist the pressure to expand access at higher levels in order to concentrate on the universalization of primary provision (Tanzania being a notable exception). Third, when schools become widely distributed effective demand for access becomes a concern of most parents; where very few schools exist access is physically limited and parents may forgo the opportunity more readily. Fourth, though there may be disillusion with the results of expanding educational provision amongst some planners, there are few signs that this is shared by parents and pupils in most developing countries. There are cases where willingness to enrol children has apparently declined (Oxenham, 1984*a*) but these are exceptional.

Maintaining enrolment ratios where there is high population growth implies substantial growth in the numbers of school places. Population growth rates in sub-Saharan Africa average 3 per cent and have reached 3.5 per cent in Ghana and 4 per cent in Kenya. Kenya faces the prospect of an increase in the number of school-age children of between two and three times by the end of the century. Although it has budgeted in excess of 34 per cent of public expenditure for education in 1985/86 this has not included significant provision for new classrooms or equipment; keeping pace with projected demand seems to imply committing in excess of 60 per cent of the national budget to education in the 1990s. Malawi, with a projected population growth rate of 3.1 per cent, will have to double its expenditure over the next fifteen years to maintain the status quo; with a rapid fertility decline it could afford to enrol all primary-age children by 2005 for less than it would cost to maintain the current enrolment ratio of 65 per cent with no fertility decline. Three other countries in Africa, Burundi, Ethiopia and Zimbabwe, could save between 50 and 60 per cent of their educational spending by 2015 if fertility rapidly declined (World Bank, 1984). Some countries are benefiting from

low rates of population growth and thus stability in the size of cohorts (e.g. South Korea and Colombia) and China has seen dramatic falls in fertility (population growth has fallen to about 1.2 per cent), but these countries are in a minority.

Manpower needs. Historically the focus of much manpower planning has been on the supply of secondary and higher education graduates to overcome general shortages and has generally concentrated on the male labour force. Recently the emphasis has shifted towards specific skill shortages and greater inclusion of women's labour. This can be seen from an analysis of twenty-nine national plans from sixteen countries spanning the period from 1966 to 1985 (Lewin, Little and Colclough, 1982). In these, manpower-development rationales were very commonly cited as the justification for expanding educational provision. Later plans stress shortages of particular types of manpower, most commonly those with scientific and technical training. The existence of 'bottle-necks', whereby developmental plans are impeded by shortages of critical categories of manpower, has provided a seductive reasoning to justify expansion. This is often well founded in principle but distorted in practice by the difficulties of restricting enrolment growth to areas of specific need.

Perceptions of manpower needs have also stimulated attempts to diversify secondary-school curricula to 'fill critical gaps' in manpower development (Heyneman, 1985). This was based on observations that school curricula were generally 'academic' rather than 'practically' orientated and that the bulk of school-leavers were likely to find employment that required practical skills. Middle-level skill shortages at the technician and craftsman level are common and it was thought that these might be reduced by offering more vocationally orientated and skill-based schooling. The main problems in implementing policy based on this reasoning—the high cost of provision of practical facilities, the shortage of competent teachers and, most important, the unwillingness of pupils and parents to follow vocational courses which led to lower-paid jobs and restricted access to higher education—quickly became apparent. The 'catch-22' nature of provision for practical subjects also attracted comment (King, 1984):

> If these programmes, aiming at the bulk of work outside the security of the modern sector, are offered before the crucial examination determining continuation to secondary and higher education, they will have little leverage on pupils' interest. If they are offered in secondary school after the critical selection, they are even less likely to coincide with pupil aspirations, since those who might now find the material useful are no longer in the schools, but are perforce practising these very arts in the rural and urban areas.

Nevertheless, the logic of diversification has been appealing and much educational expansion has been based on its presumed benefits.

Interest groups. In many countries the education system employs the largest numbers of educated and articulate manpower. Those in higher education usually have direct connections with government decision-makers and have frequently been classmates at school with them. Teacher unions often have considerable power for collective action. The strategic importance of educational qualification in access to jobs ensures the mobilization of powerful lobby groups when the educational opportunities of children appear to be threatened. What impact these factors have depends on political alignments and the power of different groups. This is not easy to generalize about and requires analysis at the country level. Nevertheless it is a reasonable proposition that such interest groups will tend to generate pressures to increase provision where they represent groups other than restrictive élites intent on protecting their own privileges.

The ideology of free and universal provision. Educational provision over a basic education cycle is now widely accepted as a basic human right. Few countries do not subscribe to this as a principle underlying policy. It has compelling moral, social and ideological attractions and is populist. This view of a right to formal educational provision for all is historically recent even in the industrialized countries (Lewin, 1986*b*). The United Nations Universal Declaration of Human Rights (1948) commits members to the statement that

> Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages.... Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.

Subsequently universal provision as a right was reasserted in the series of regional conferences in the 1960s—Karachi in 1960, Addis Ababa in 1961, Santiago in 1963 (Brock, 1981; Thompson, 1981; Watson, 1981)—which set enrolment targets for countries to achieve. The 1970s saw many countries adopt universal primary education as a priority. A decade later universal secondary education has become the goal in many that have not already achieved it (e.g. Nigeria, Kenya). The political attractions of offering universal access have proved irresistible to local and national politicians aware of the kudos attached to opening schools and increasing educational opportunities—this even where resources available are a long way from being adequate to give much prospect of living up to the ideal.

Developing the model

Some new dimensions. Ability and willingness to make resources available were used above to structure discussion. This is an over-simplification of the complex bargaining process that takes place in policy-making. It largely ignored interactions between different types of constraint and opportunity. The conceptualization of these can be improved by borrowing from the psychological literature on attribution theory (Little, 1982). Three orthogonal dimensions of attribution have been used to understand explanations given by individuals of social events. These are internal–external, controllable–uncontrollable, and stable–unstable. Though the parallels should not be pushed too far, the schema developed for this purpose can be applied to the allocation of educational resources, with a change in one of the dimensions. Substituting certainty–uncertainty for stability–instability has the advantage of focusing attention on a key aspect of the changing climate within which planning takes place. Stability, as used by attribution psychologists, refers to variation in psychological traits. Educational planning is concerned with dynamic systems

	CONTROLLABLE		UNCONTROLLABLE	
	Certainty	**Uncertainty**	**Certainty**	**Uncertainty**
Internal				
External				

FIGURE 2. *Framework for the analysis of factors affecting resource allocation*

where uncertainty about the nature of change is arguably more important. The importance of internal and external policy agendas has been noted by others (e.g. King, 1985*b*). Controllability is central to planned intervention. The analytical framework that then emerges consists of that produced by locating different factors within a matrix of the kind shown in Figure 2.

Before discussing how this might be useful in practice several points need highlighting. First, though the model may be generally applicable, the distribution of factors between the cells of the matrix is not. It will depend on judgements about the special nature of these in different countries. What is primarily an external constraint that is uncontrollable and has a high level of uncertainty in one country may be regarded as internal, relatively controllable and predictable in another. Educated unemployment might be an example of this. Classification within the matrix is therefore possible only within a set of social, economic and political judgements that will be different for each policy-making system. Second, the distribution of factors will almost certainly change over time to reflect changes in both the domestic and international context of development. Thus effective family planning may affect apparently uncontrollable, and unstable, high levels of population growth and move the position of such a factor within the matrix. Third, the model is dependent on the perspective chosen for viewing the factors. It is tempting to take the view of the state as the most appropriate one, though this in itself begs the question of how monolithic the state is. If this is done the potential controllability, uncertainty and internal or external origins of factors will be conditioned by ideology. Marxist states will classify factors differently from those committed to *laissez-faire* capitalism. The model could also be used from the perspective of other groups with an interest in resource allocation, e.g. donor agencies, provincial-level planners, politi-

cal representatives, parents, teachers, pupils. All might arrive at different judgements on distribution since they would approach the problem within different sets of assumptions and with different values. Understanding what these are and how they conflict is an important part of policy-making that seeks some consensus and requires collective commitment for effective action.

The matrix developed above can be used in the following way. First, factors such as those identified in the preceding discussion of ability and willingness need to be identified and prioritized. If decision-making has a rational basis then it will have depended on precisely this kind of weighing up of the importance of different factors. Second, a perspective has to be chosen to classify these factors according to the dimensions of the model. In the first instance this might be that of the decision-maker within the ministry of education. It is then possible to accumulate in the cells of the matrix factors which are seen to be internally or externally determined, more or less controllable, and subject to greater or lesser uncertainties. The profile that this produces has several useful features:

1. It generates explicit consideration of the qualities of different perceived constraints and opportunities.
2. It concentrates attention on those factors which are controllable and more predictable while alerting policy-makers to those over which control is more tenuous and uncertain.
3. It opens up the possibility of comparing the matrix of factors produced from one perspective with that produced from another.
4. It enables ability and willingness to be understood in ways where interaction between them is clearer and where contrast between perspectives can highlight the political nature of judgements on these.

Two examples. Two hypothetical cases can be contrasted to see how the matrix might appear in practice. In the first case we consider a country which is small, heavily dependent on the export of a single commodity which fluctuates widely in value, strategically placed and a large recipient of aid, with a small powerful élite, and a school system that has historically restricted access to small numbers but now has a radical government committed to universal provision and equal access. The matrix could

	CONTROLLABLE		UNCONTROLLABLE	
	Certainty	**Uncertainty**	**Certainty**	**Uncertainty**
Internal	Manpower needs Educated unemployment Migration Universal provision Qualification escalation Population growth	Interest groups Social demand		
External			Aid flows Debt	International trade Conditionality on loans

FIGURE 3. *Resource allocation: example 1*

look like that shown in Figure 3. Here international trade, aid flows, debt and loan conditionality are seen as externally controlled. From the point of view of the state there is some certainty about aid flows (as a result of a strategic location and foreign bases), though they are uncontrollable. Similarly, debt has been inherited from the previous borrowing and is certain to feature in the national accounts, but conditions associated with its repayment are uncertain and uncontrollable. In contrast, internal factors are thought to be more controllable and less uncertain since centralized planning with a strong indicative character is designed to ensure this. Thus manpower needs for the small economy are planned in detail and employment in the largely government-controlled modern sector matched with school outputs. Migration is not a significant problem and is discouraged by bonding to government service as a condition of scholarships. Universal provision is accepted as a goal for the first cycle and is achievable in a small, compact system. Populist measures to tax the élite and their economic activity more heavily make this feasible. The government see the reaction of interest groups as controllable and predictable as power is redirected away from traditional élites. Population pressures to expand enrolments are viewed as controllable, as is social demand for

more schooling, since the government believes it can educate the population to see what is in its collective interest. This strategy includes trying to guarantee a basic standard of living for all, with reduced levels of income inequality between those with high levels of educational qualification and those with only the basic cycle completed, thus reducing qualification escalation.

The second hypothetical case is a large country with a mixed and diversified economy with a large internal market. Aid plays a small role in the economy as a whole, though there is substantial commercial borrowing and large-scale activity by multinational companies. The school system is unevenly developed in different regions and there is substantial autonomy within the federal structure of government for states to organize provision differently. Ethnic diversity, varying economic activity between different parts of the country, and different traditions of government have prompted the development of a pluralist democracy within a capitalist state that is disposed against intervention and which has faith in market forces to stimulate development to the benefit of all. National élites find themselves in conflict with local élites over educational policy.

In circumstances like this the matrix might look more like Figure 4. Here international trade is regarded as more certain since the revenue it generates is dependent on a wide range of

	CONTROLLABLE		UNCONTROLLABLE	
	Certainty	**Uncertainty**	**Certainty**	**Uncertainty**
Internal			Social demand Educated unemployment Qualification escalation	Manpower needs Interest groups Universal provision Migration Population growth
External	International trade Aid Conditionality of loans	Debt		

FIGURE 4. *Resource allocation: example 2*

commodities—a fall in prices in one sector may be compensated by an increase in another. Aid flows are relatively unimportant and are controllable since the government has considerable influence as a regional 'superpower' and can choose its international benefactors. Similarly it has influence over the conditions attached to its borrowing as a result of its importance as a debting country, though it is reluctant to use foreign-exchange controls and other devices to restrict private flows as a result of its non-interventionist posture. There is therefore uncertainty about levels of debt and the repayment burden they generate. Many internal factors which condition resource provision for education are seen by government as outside its direct control. Manpower needs are determined by the complex interplay of market forces and are difficult to predict. Pressures from interest groups vary widely as there are many of them and they have different significance in different provinces. Demand for education is high, except in nomadic regions, and is fuelled by intensely competitive pressures to gain access to modern-sector jobs the supply of which the government does not control. Educated unemployment is common in urban areas and has reached magnitudes where no conceivable job-creation programmes could absorb it. It is accompanied by qualification escalation associated with convenience screening by employers. Commitment to universal provision exists on paper but the government is not capable of implementing it since much responsibility has been devolved through the federal system to states which take different views of of its priority and their willingness to resource it. Migration of educated manpower is a particular problem with high-level technical staff who are trained in world-class facilities and may earn many times their domestic salaries abroad. The government is reluctant to discourage this and experience has shown the difficulties of enforcing disincentives and controlling nationals who have powerful connections with domestic élites. Population growth is high and uncontrolled. Attempts at family planning have foundered on ethnic rivalries, religious objections and heavy-handed promotion. Inequality is growing and a dual economy is firmly entrenched and there is little intervention, except of a non-government nature, to provide for the basic needs of the poorest groups in the population.

The contrast between the matrices is striking. It makes clear

that different profiles of factors influence decision-making on educational resources. It highlights how factors that may seem controllable or relatively predictable in one case may be viewed as uncontrollable and uncertain in another. To keep the example simple, strong contrasts have not been made here on the internal–external dimension but it is not difficult to see how factors might be located on this dimension differently, depending on circumstances. Debt and aid, for example, can be seen as under internal or external control, depending on the analysis of their nature and the political will of governments. The matrix also draws attention to the need to attach weights to different factors. In reality the factors that are likely to be significant will vary from country to country. Some of those described here may be of no importance in the planning process; others may need incorporating

The use of this kind of framework provides a heuristic tool that can be used to chart different factors in decision-making and the assumptions, beliefs and evidence on which they are based. It represents a first attempt to come to grips with the complex reality of decision-making on educational resources that is essentially qualitative in nature. It cannot provide the solution to planning problems nor is it intended to do so. Rather it seeks to stimulate insight into the framework of decision-making. At the very least an exercise of this kind, refined and developed from these preliminary thoughts, should be part of the analysis of the room to manoeuvre that exists in education and development policy which is suggested in Chapter V as an element of an approach to planning in austerity.

IV. The impact of austerity

Planning in conditions of austerity is not simply the reverse of planning for growth. A loose analogy with magnetic hysteresis serves to make the point: inducing magnetism in a material through the application of an external magnetic field results in a characteristic curve of alignment of magnetic domains; if the material is demagnetized the disruption of alignment does not follow the same pathway and requires more energy to decay to a particular level than it does to acquire it. There are organizational, procedural, political and psychological reasons for the asymmetry of resource allocation under conditions of growth and contraction. Eight proposition are developed below to illustrate the consequences of austerity for educational provision. The propositions are:

1. Social-sector spending is particularly vulnerable to general budgetary restraint.
2. Reallocation within the education sector is likely to favour salary recurrent expenditure at the expense of non-salary recurrent and capital spending.
3. The distribution of expenditure and resources between levels (primary/basic, secondary, tertiary) may change as a result of reduced spending in aggregate and/or unit-cost terms, in ways which favour the higher levels.
4. Formal-sector provision is less vulnerable than non-formal, pre-school and adult education.
5. Significant cost reduction can come only from salary budgets, since these are responsible for most costs, but it may do so in ways that compromise quality.

6. Cost-recovery schemes (which reduce the burden on public expenditure) are becoming a common feature of educational financing but they can have deleterious effects on equity and access.
7. Increased dependence on donor support is likely in those countries with the most sustained budgetary pressures.
8. The medium- and long-term consequences of retrenchment may negate short-term benefits, and damage prospects for sustained progress towards development goals.

Vulnerability of social expenditure

Education-sector spending is vulnerable in conditions of austerity for several reasons. First, social-sector investment which includes education is more likely to be under domestic control than, say, debt servicing. Second, education, as one of the largest elements of social expenditure, presents itself as having the potential for substantial savings. As a proportion of central-government expenditure, education averages nearly three times as much as health in sub-Saharan African low-income countries and 50 per cent more than defence; amongst lower-middle-income countries, education averages more than three and a half times health but slightly less than defence (World Bank, 1985). Third, where economic policy favours a diminution in the role of the state in providing services the social sector as a whole is likely to be vulnerable. This is perhaps more the case than with defence spending. In the low-income economies defence spending increased its proportion of total expenditure from 11.4 per cent to 18.5 per cent between 1972 and 1982 (World Bank, 1984, 1985). Finally, where short-term planning horizons are dominant, as they are in economic recession, it is those sectors that have long lead-times and long-term benefits that appear least attractive. Educational provision has these characteristics.

Analysis of central-government expenditure does show that the proportion allocated to education in relation to other sectors has suffered disproportionately. Over the ten-year period 1972–82, according to World Bank data (1985), the picture of increases and decreases is as shown in Table 6. Thus educational spending was reduced as a proportion of central-government expenditure

Table 6. Increases (+) and decreases (−) in the proportions of central government expenditure on: defence; education; health; social security, welfare, housing and community amenities; economic services; and in total government expenditure, as a percentage of gross national product, 1972-82

	Defence		Education		Health		Social security etc.		Economic services		Others		Total govt. expenditure as % of GNP	
	+	−	+	−	+	−	+	−	+	−	+	−	+	−
Low-income economies	2	5	1	6	0	7	5	5	3	4	5	2	5	4
Middle-income economies	6	3	1	9	5	5	3	5	3	6	5	5	14	3
Upper-middle-income economies	6	8	5	8	6	7	11	3	4	10	9	5	12	2
SUBTOTAL	14	16	7	23	11	19	19	13	10	20	19	12	31	9
Industrial market economies	0	9	1	8	6	3	7	2	2	7	3	6	14	1
GRAND TOTAL	14	25	8	31	17	22	26	15	12	27	22	18	45	10

SOURCE Compiled from *World Development Report 1985*, Washington, DC, World Bank.

more frequently than any other category apart from health. This was a marked tendency amongst the lower-middle-income countries. During this period the proportion of GNP represented by central-government expenditure tended to rise much more frequently than it declined. This took place in the context of low growth rates in GNP in many of these countries, with those in sub-Saharan Africa actually being negative.

There is a counter-argument to the proposition that social sector spending will suffer disproportionately in times of austerity. It is based on the political opposition that reductions in established services are likely to generate. Benefits of social expenditures are widely, if unequally, distributed and most of the costs are in payments to staff. Reductions are therefore difficult without reducing salaries or total employment, both of which are likely to generate political opposition. Hicks and Kubisch (1984) have undertaken an analysis across thirty-seven cases of conse-

cutive-year reductions in government expenditure in low- (seventeen) and middle- (twenty) income countries. This shows an average reduction of 13 per cent in real expenditure with an average reduction for social-sector spending of only 5 per cent. By contrast they claim that administrative and defence spending was reduced by an average of 8 per cent, that on production by 11 per cent and on infrastructure by 22 per cent. Within this overall picture they note significant differences between countries. Social-sector spending was reduced more than the average in Turkey, Guyana and the Sudan but actually increased in Brazil, Indonesia and the Philippines. They also have reservations about the non-representative nature of their sample.

The emphasis on recurrent expenditures and the large employment component of social-sector spending does make it difficult to reduce spending rapidly without a destabilizing reaction. But what is really of consequence is to establish how enduring such effects are. Hicks and Kubisch did not analyse trends in subsequent years which might show a different pattern, with time-lags on effects on social-service expenditure. Sustained, as opposed to consecutive-year, reductions may well produce a different result, one in which employment stagnates or declines and salaries are reduced in real terms by increases below the rate of inflation. A preliminary analysis of Unesco (1985) data on the country cases chosen by Hicks and Kubisch lends some support to this possibility. This involved examining the percentage of GNP allocated to educational expenditure, the percentage of total government expenditure allocated to education, current expenditure as a proportion of total educational expenditure, and current expenditure on education as a percentage of total government expenditure. Increases and decreases in these were examined over a five-year period bracketing the years of negative growth in real government expenditure as nearly as possible (see Table 7). About equal numbers of countries increased and decreased the proportion of GNP allocated to education in this group of countries. More than twice as many decreased the proportion of government expenditure on education than increased it. Current expenditure as a proportion of the total rose in more cases than it dropped (14 to 10) and a great majority (13 to 2) decreased the proportion of total government expenditure allocated to recurrent educational expenditure. This different picture may reflect

Table 7. Increases (+) and decreases (−) in government expenditure on education (for five-year periods, bracketing years of negative growth in real government expenditure)

Percentage allocated to education of				Current expenditure on education as a percentage of			
Gross national product		Government expenditure		Total government expenditure on education		Current government expenditure	
+	−	+	−	+	−	+	−
17	16	7	18	14	10	2	13

SOURCE Unesco, *Statistical Yearbooks 1970-85*, Paris.

longer-term adjustments to pressure on public expenditure than is shown by examining expenditure in consecutive years. The crude analysis presented in Table 7 requires greater refinement than was possible for this study. It does suggest that the picture of protected social-sector spending suggested by some may not fully represent the medium- to long-term prospect.

Where there is pressure on public expenditure a substantial body of opinion suggests that the impact on services to children is particularly acute (e.g. Cornia, 1984; Jolly and Cornia, 1984; Unicef, 1984). Even some of the most buoyant economies around the Pacific rim have suffered from this recently. In Malaysia operating expenditure on social services which included education declined in 1983 by 4.2 per cent and development expenditure by 38.5 per cent in current prices. This heralded the beginning of a period of lower economic growth rates: the 1986 expectation is of a 2.6 per cent increase in public-sector spending compared to 7.3 per cent in 1985. The government argues that it is trying to protect selectively some aspects of public expenditure aimed at 'expanding the productive base of the economy and improving social services essential to the public' (Government of Malaysia, 1985). In Thailand similar problems have emerged related to a weakening taxation base. The taxation power of the Thai Government fell from more than 19 per cent of GDP in the early 1970s to about 14 per cent by 1982, thus diminishing the flow of revenue. The National Education Commission Survey (1983) noted that:

> Central government educational expenditures absorbed about 3.4 per cent of GDP in 1981, which is a moderate percentage. If they grew at the same rate as total government expenditure, they would represent 4.2 per cent of GDP in 1986. However the government envisages decreasing somewhat the share of educational expenditure in public expenditure.

The problems of these countries in maintaining levels of public expenditure pall into insignificance compared with those of developing countries which are major oil exporters and indebted at high levels. At the then prevailing price of oil (April 1986) Mexico would need to spend half of all its currency earnings just to cover the interest on its debt; Nigeria (with 97 per cent of foreign earnings from oil) will not be able to pay the interest on loans or finance even half the current year's public-expenditure budget of US$8 billion without dramatically exceeding the target of restricting debt repayments to no more than 30 per cent of foreign earnings (*Observer*, 6 April 1986).

Whether or not attempts are made to protect social-sector and education expenditure relative to other categories is a political decision. Even if this is done, the poorer countries and those deepest in recessionary problems will not be able to sustain current levels.

Budgetary distribution

The second proposition is that with stable or contracting budgets structural changes are likely to occur in their distribution. The balance between capital, non-salary recurrent and recurrent costs is likely to shift in favour of the last. Salary costs must be met in the short term; non-salary recurrent expenditure (e.g. school materials, buildings, maintenance, support and advisory services, and travel costs) can be reduced; capital expenditure that is budgeted but not committed can be reallocated to cover deficits in the recurrent budget or simply suspended. Thus, for example, in Thailand over the period 1977 to 1981 the share of personnel expenditure in public recurrent expenditure on education increased from 80.0 per cent to 85.9 per cent in pre-primary and primary, from 91.9 per cent to 95.2 per cent in general sec-

61

ondary, and from 52.8 per cent to 56.3 per cent in vocational education (Unesco, 1983*b*). The costs of materials represented a small fraction of the recurrent budget, except in the vocational schools, and fees collected by schools provided three-quarters or more of the money spent, depending on the wealth and generosity of the communities served.

An analysis of educational budgets in developing countries shows how much budgetary drift, as described above, has been occurring. Three key indicators were chosen for this:

The percentage of educational expenditure that was allocated to recurrent budgets rather than capital.

The percentage of recurrent expenditure allocated to teachers' emoluments;

The percentage of recurrent expenditure allocated to teaching materials.

Unesco data for all countries for which they were available were examined taking three time periods: 1975 ± 1, 1980 ± 1, 1983 ± 1. Increases or decreases were then computed for 1975–80 and 1980–83 for different groups of countries with the results shown in Table 8. This presents a compelling picture of structural shifts in budgetary allocations. In the earlier period similar numbers (35 to 32) increased and decreased the proportions of their budgets allocated to recurrent expenditure. Since 1980 nearly three times as many countries have increased recurrent expenditure at the expense of capital and development allocations. This is a striking shift in emphasis. It is explained most plausibly by the interplay of factors which favour the maintenance of recurrent expenditure largely composed of salaries. The trend appears to be true in all regions and is particularly strong in Africa, especially sub-Saharan Africa, and South America (though it must be remembered that several South-American countries have substantial private funding for education).

Teacher emoluments declined as a proportion of recurrent expenditure in 35 countries and rose in 25 during the first period. This tendency was reversed after 1980 when 36 countries saw an increase in this proportion whilst only 22 witnessed a decline. Again all regions experienced this but sub-Saharan Africa seems to have been particularly susceptible since even in the earlier period a majority of countries were increasing teacher emoluments as a proportion of recurrent budgets. Post-1980 the

Table 8. Increases (+) and decreases (−) in recurrent expenditure, expenditure on emoluments and expenditure on materials, as a percentage of the total, 1975-80 and 1980-83

Region	Recurrent expenditure		Expenditure on			
			Emoluments		Materials	
	+	−	+	−	+	−
Africa						
1975–80	15	11	13	16	5	14
1980–83	12	4	14	4	5	9
Sub-Saharan Africa						
1975–80	12	7	12	10	4	10
1980–83	9	7	9	2	2	6
Central America and the Caribbean						
1975–80	7	6	3	9	2	6
1980–83	10	4	6	8	4	7
South America						
1975–80	3	4	1	4	2	2
1980–83	4	1	4	2	1	3
Asia						
1975–80	10	11	8	6	3	9
1980–83	15	5	12	8	8	10
TOTAL						
1975–80	35	32	25	35	12	31
1980–83	41	14	36	22	18	29

SOURCE Unesco, *Statistical yearbooks* 1976–85, Paris.

two countries in sub-Saharan Africa that decreased teacher emoluments as a proportion were Burkina Faso (where they did increase from 49.8 per cent to 56.1 per cent, if the period 1982–83 is chosen) and Rwanda (where the reduction was only from 80.6 per cent to 80.4 per cent).

Expenditure on teaching materials as a proportion of the recurrent budget decreased in both time periods, more frequently in the first (31 cases to 12) than in the second (29 cases to 18).

Sub-Saharan Africa and South America saw their positions worsen, though other regions improved their proportions. In the case of the African countries particularly the slow-down in reductions in the proportions allocated is often taking place on a very small base. Of those that increased proportions after 1980 some of the increases were of this kind. The cases were Algeria (0.3–0.7 per cent), Burkina Faso (0.4–2.6 per cent, though the 1982 figure was only 0.7 per cent). Others occurred in small countries where one programme may have been responsible (e.g. Djibouti and St Helena). Eight of the African countries allocated less than 1 per cent of recurrent expenditure to teaching materials in the last period, suggesting they had little leeway for further reductions.

These budgetary shifts may have even more dramatic consequences than these figures suggest. In countries where the real value of government expenditure has fallen—Zambia is probably the most dramatic example of this, where total government expenditure declined 38 per cent in real terms between 1975 and 1981—recurrent expenditures may grow as a percentage of the total budget and yet have less real value than before. This suggests that if the above table were constructed using the real value of budgetary allocations rather than their proportional share the situation would look even more extreme.

It is important when considering the implications of these shifts for planning to recognize that these changes are not ones which are directly planned. They owe more to short-term expediency and the exigencies of crisis management than to an analysis of costs and benefits. The fact that it may be easier to constrain some budgets rather than others does not suggest that the collective interests of the state or the population are best served by taking the path of least resistance. In some ways this is likely to be even more counter-productive than a strategy of 'equal misery' that seeks to distribute reductions equally amongst spending units regardless of the different consequences of reductions on different types of expenditure. Shifting resources away from capital and development expenditure reduces opportunities to extend provision to those who are not enrolled. It implies that expansion in numbers as a result of population growth must take place within available classroom space. Non-salary recurrent expenditure which provides teachers with basic facilities and

teaching material has been shown to be critical to attempts to improve school achievement (Heyneman, 1983*a*). Materials cannot be supplied to significant proportions of school populations across a range of subjects where less than 1 per cent of budgets is allocated for this purpose, especially if the expenses involved in teaching subjects that require practical facilities are considered. The danger, as the World Bank (1984) pithily observes, is that

> Because most expenditure is in salaries (in social sector programmes) there is reason to believe that provision of materials and supplies will fall more (than overall budgets) and cause greater damage. These effects may well outlast the resolution of the current debt problem.

Allocations by level

The third proposition is that resource allocation during periods of restraints may favour tertiary- and secondary-level provision at the expense of primary- or first-level provision. The arguments here are less clear-cut than for the first two categories and establishing trends is more difficult. The distribution of expenditure between levels is the result of a complex interplay of factors which make cross-country comparisons difficult. Allocations to primary level, and their rate of growth, will depend on how high enrolment levels are; what the commitment is to treat universal primary education as a priority; and how much effective demand there is among parents whose children are not in school. Secondary-level allocations will be influenced by: the size of primary enrolments, which create pressures to expand secondary; historical traditions of acceptable progression rates from primary to secondary; commitments to universal secondary education in those countries which have announced this; the mix of high- and low-cost types of provision; the importance of secondary-level qualifications in the labour market and the demand for secondary-educated employees; and the amount and type of private provision. Tertiary provision is subject to most of these influences as well as those that stem from: high-level manpower needs; national development priorities in research, development and the localization of expatriate manpower; opportunities for

overseas education; and the status that graduates enjoy. The budgetary consequences of decisions on enrolments at a given level depend greatly on the unit costs associated with places. These vary widely between level and between countries at the same level. In any given case the factors that affect unit costs may operate in different directions and the outcome is unlikely to be capable of simple cross-country comparison. Thus, for example, reduction in the proportion of resources allocated to primary provision, where it occurs, may reflect a slow-down in population growth or economies gained from amalgamating small schools with very low pupil:teacher ratios, as much as a downgrading of primary provision as a priority. Similarly, increased tertiary allocations may reflect increased prices of books and equipment which are marketed internationally and which have become relatively more expensive, whilst enrolments are stagnant.

The financial control and administration of education is arranged very differently in different countries. Where there is not a single ministry but several responsible, allocations between them may be relatively independent or interact in complex ways; where there is a single authority there is a greater chance of direct conflict between the needs of different levels. A distinction needs to be made between relative and absolute disadvantage. Since unit expenditure and institutional budgets at lower levels are often orders of magnitude smaller than that at higher levels the same reduction in proportionate terms can mean significant absolute changes in resource availability.

Despite these difficulties an argument can be advanced which is suggestive of the potential vulnerability of provision at the first level. In essence the contention is that most primary provision is rural and away from the centres of power; secondary provision is urban and its clients are more likely to include children of articulate and influential parents; tertiary institutions often enjoy special access to national decision-makers and enjoy considerable prestige and public visibility in protecting their interests. Even where the unit-cost implications of restraint are similar in percentage terms the real consequences of these disproportionately affect the primary sector, where the base from which to cut expenditure apart from salaries is minuscule. Pressures for selection are increasingly concentrated at levels above

primary as primary schooling becomes more widely available. Where it is the norm for most children to complete primary it is completion of secondary that is critical for modern-sector labour-market access. Similarly, where large numbers complet secondary, pressure for access to university and the expansion of provision at this level will be greatest. Higher-education spending is also protected by the fact that international standards of provision are more likely to be argued at tertiary level as being essential to maintain. The 'technological inflation' (equipment costs have increased more rapidly than consumer price indexes, greater quantities of equipment are needed to teach university-level courses in a given field than twenty years ago) associated with maintaining world-class facilities, especially in science and technology, favours the protection of higher-education budgets. Technological dependence may also skew manpower needs in favour of shortages related to the requirements of multinational capital for indigenous trained manpower and this is likely to favour higher and more expansive types of provision. It has been argued (International Institute for Educational Planning, 1985) that

> the planning of training for skilled workers and managers (in technologically dependent countries) tends to be heavily conditioned by the training needs formulated by foreign centres, which in general correspond to specialized and compartmentalized qualifications. Even if educational planning seeks to provide training for broad sections of the population, through the general and basic education necessary for the acquisition of technical and professional qualifications, it will be seriously out of line from the standpoint of long-term effectiveness.

External pressures may therefore promote investment at higher levels, at the expense of the rest of the education system, even though this will tend to increase rather than decrease technological dependence if its character is determined by the need to use imported technology rather than to adapt and innovate.

The proportions of education budgets allocated to different levels have been calculated on a regional basis for 1975 and 1981 (Unesco, 1985). In aggregate, third-level expenditure fluctuates between 22 and 24 per cent in Africa, Latin America and the Caribbean, but averages about 15 per cent in Asia and the Pacific, thus releasing a higher proportion for primary- and

second-level education. First-level expenditure has declined over the period of the analysis amongst African countries from just under 40 per cent to about 30 per cent, whilst at second level it has increased from about 30 per cent to just under 40 per cent. This is partly attributable to the progress made in enrolment growth towards universal primary provision, but the expansion of secondary has occurred in many countries where this is still a long way from being achieved. In Latin America and the Caribbean secondary-level expenditure has declined from 23 per cent to 15 per cent, though this effect may be partly explained by the growth of the unallocated proportion of expenditure (from 17 per cent to 22 per cent) and by increasing private provision in some countries. Global trends such as these will conceal changes within countries that may reflect shifting priorities which favour higher levels.

Some countries in sub-Saharan Africa have reduced primary-level allocations and increased those for tertiary though they are far from providing universal primary education. Burkina Faso reduced first-level recurrent expenditure as a proportion of its budget from 43.3 per cent to 32.3 per cent and increased third-level from 24.8 to 33.7 per cent between 1975 and 1980, though enrolment ratios at first, second and third level were only 24, 3, and less than 1 per cent respectively in 1980; Burundi (enrolment ratios 29, 3 and 1 per cent), Mauritania (enrolment ratios 33, 10 and 1 per cent) and Senegal (enrolment ratios 44, 10 and 3 per cent), also made changes following a similar pattern. In all cases more than 20 per cent of the recurrent budget was allocated to the third level (exceeding 33 per cent in Burkina Faso in 1980) though in most cases less than 1 per cent of an age group were enrolled at this level. These cases are extreme but the situation is not completely unlike that in some other countries. Patterns of enrolment growth in many countries have continued to favour the higher levels. In Sri Lanka between 1975 and 1980 Grade 5 enrolments grew by 4 per cent, Grade 9 shrank by 19 per cent, Grade 12 (pre-university) grew by 200 per cent. Unit costs rose by 15.5 per cent in Thailand for university education between 1980 and 1982, but by only 13.6 per cent at secondary level. In Malaysia between 1983 and 1984 recurrent and development expenditure on education remained constant in cash terms, representing a real decline. The proportion of the budget allocated

to primary decreased from 39.0 per cent to 37.2 per cent, to secondary from 34.4 per cent to 33.4 per cent, but that for tertiary increased from 10.4 per cent to 13.1 per cent. In all these cases changes are not as simple as these observations may imply. Nevertheless, much of the available evidence reinforces concern that recession may have a different impact on provision at different levels.

Allocations by sector

A fourth proposition is that formal provision is likely to be less vulnerable than pre-school, out-of-school or post-school non-formal provision and adult education. The case here is that these areas often service already marginalized groups, are organized on a relatively temporary programme basis, are often staffed by non-established personnel, may rely on voluntary inputs and are frequently of low political priority as a result. Provision is often fragmented organizationally and geographically and therefore more susceptible to *ad hoc* reductions with only limited opposition from interest groups. An exception to this is where non-formal delivery strategies have been chosen as a central feature of mass educational provision. The situation may also be different where extensive correspondence or distance-learning programmes have been set up nationally to cater for excess demand and offer essentially similar courses to those in the formal sector at much lower cost. Though enrolments in these can be extremely large, they may be accompanied by similarly impressive wastage rates. Where non-formal provision is dependent on voluntary inputs—the most common circumstance—these are likely to be affected by a downturn in economic conditions since this reduces disposable income and the profitability of sponsoring organizations.

A recent study of adult education (Carr-Hill and Lintott, 1985), synthesizing data from eighty-four countries, supports the reasoning advanced above. There are very wide variations in the proportions of populations that are enrolled in adult education between countries. Most countries have enrolment ratios of less than 50:1,000 of the population older than 15 years in Africa, Asia, Latin America and the Caribbean. These enrolments are

concentrated amongst the youngest members of this group: 83 per cent are under 30 years old in Swaziland, 73 per cent are under 25 years old in Ecuador and 58 per cent in Nicaragua. In Africa the highest proportion is in Tanzania (401:1,000), though many countries enrol fewer than 10:1,000. Variations in Asia cover a smaller range, with a high of 237:1,000 in the Philippines, though most fall between 5:1,000 and 30:1,000. Latin America and the Caribbean includes Nicaragua with the highest ratio, 211:1,000, and most countries fall between 20:1,000 and 60:1,000. The proportion of women enrolled varies widely from a low of 9 per cent in Egypt to a high of 83 per cent in Jordan. The types, level and duration of programmes adult-education students follow also vary so widely from country to country that comparisons are not simple.

Changes in these enrolment ratios over time display a pattern amongst African countries. These reached a peak in 1979 and have subsequently fallen. There are three exceptions to this: Guinea-Bissau (which fell in 1977/78 and recovered up to 1981), Mozambique (for which data were incomplete but which peaked in 1981); and Somalia (which saw a continuous decline from 1976). Carr-Hill and Lintott ascribe this pattern to the impact of recessionary pressures on public-expenditure budgets. However they also note that those countries where adult-education enrolment is high are more likely to maintain this because it is a central feature of their educational development strategy. The trends in other parts of the world are not so clear. In Latin America and the Caribbean some show a continuous fall—Argentina, Cuba, Guatemala; some rise—Honduras, Mexico, Paraguay, Uruguay, Colombia (all but Colombia from low levels around 10:1,000); some show a rise and a fall—Barbados, El Salvador and Venezuela; and some a fall followed by a rise—Chile and Panama. In Asia the trends are also very mixed, with four countries showing recent downward trends—Bahrain, Cyprus, Israel and Kuwait—and most of the others fluctuating around at or above their 1976 values. (Most of the countries in this group enrol relatively few adult-education students compared with other regions).

The pattern of increases and decreases can be summarized in a different way as shown in Table 9. Thus eleven countries reduced

Table 9. Increases and decreases in adult enrolment ratios per 1 000 population over 15 years old; latest year available compared to 1976 (or closest year to this)

Region	Decrease greater than 25 per cent	Plus or minus 25 per cent of 1976	Increase greater than 25 per cent
Africa	4	5	1
Developing Asia	3	8	4
Latin America and the Caribbean	4	8	3

SOURCE: Carr-Hill and Lintott, 1985.

enrolment ratios over this period and eight increased them. In Africa the trend towards reduction was particularly strong (four decreases and only one increase). Adult-education enrolment is loosely associated with economic development in the sense that industrialized countries tend to have greater proportions of enrolled students in adult education. However, given the problems of definition, this comparison must be treated with great caution since types of programme vary greatly.

Reducing recurrent costs

A fifth proposition is that sustained budgetary pressure will lead to reductions in the recurrent costs of systems through one of several mechanisms which affect teacher costs. This is unavoidable since the bulk of costs, often more than 90 per cent, are to be found in salary budgets (Heyneman, 1983*a*). There are three main kinds of developments which are taking place.

Teachers' salaries may be allowed to decline in real terms if they are increased at rates substantially below the rates of inflation.

The proportion of young, inexperienced or temporary teachers who can be held at low salary levels may be increased.

Pupil:teacher ratios may be increased, thereby reducing the aggregate demand for teachers.

Declining salaries. Teachers' salaries cannot be reduced in the short term without risking political unrest in most countries, since they form such a large cadre within the public sector. Over time, however, salaries may be eroded by restricting pay awards to levels below the rate of domestic inflation. Adopting incremental scales with small steps and many efficiency and promotion bars can also contribute to a downward drift in the size of the salary bill if the age structure of the teacher establishment allows it. Without adjustment of this kind there is a built-in tendency for the cost per teacher to rise as teachers proceed up incremental scales if recruitment policy limits new entrants and allows the average age of teachers to rise. For example, in Sri Lanka teachers' salaries have declined relative to other workers', as Table 10 shows.

Thus teachers' salaries in Sri Lanka had fallen to 80 per cent of their 1952 value by 1980 whilst agricultural incomes had more than doubled in real terms. Though salaries of teachers appear to have nearly doubled since 1980, with a rise in the graduate teacher salary minimum from 5,880 rupees in 1980 (Budget Estimates, Ministry of Education, 1981) to 11,700 rupees in 1985 (Budget Estimates, Ministry of Education, 1985), the consumer price index rose from about 200 at the beginning of 1980 to 402.6 by the end of 1983. This suggests that the underlying trend in teachers' salaries is still one of deterioration. It applies also to higher education. The all-inclusive salary of a new member of faculty with five years' experience, a Ph.D. and a good first degree is 2,325 rupees per month (less than £500 pounds sterling per year). University deans have gone on record stating that 'Re-

Table 10. Teacher salaries in Sri Lanka, 1963–80, compared with those of workers in other sectors (in terms of a real wage index where 1952 = 100)

Year	Teachers	Agriculture	Industry and commerce	Central government
1963	107.9	104.1	120.3	116.5
1965	104.4	104.4	118.0	112.6
1970	102.1	101.4	120.2	124.0
1975	86.6	121.6	138.8	112.1

SOURCE Central Bank of Ceylon, 1980, 1981

cruitment of suitable staff to fill cadre positions has been impossible. Retention of the few who have been recruited is also impossible' (*The island*, international edition, 19 April 1986).

This pattern is not an isolated phenomenon and has been a feature of public-sector salaries in many countries. In Ghana teachers' incomes have been severely eroded over the last decade, leading to an outflow of trained staff, and Zambia has suffered similar problems as a result of its declining public-expenditure budget. Subject areas where there is a buoyant domestic and international demand—most obviously in scientific, mathematical and technical subjects—are particularly severely affected by this. One response to this is to reward mathematics and science teachers with extra payments and different salary scales in order to attract and retain them, but this may be difficult to introduce where teachers' unions are strong. There is evidence (Tibi, 1987) from several other countries of a decline in the real value of teachers' salaries. Teachers' salaries declined in Morocco by over 40 per cent in a period of ten years; in the Philippines between 15 per cent and 50 per cent, depending on the grade of teacher; and in Nigeria by up to 40 per cent between 1971 and 1979. Mexican and Peruvian data show similar downward trends. These changes may be consciously planned but it would be a brave planner or politician that admitted it.

Lower-cost teachers. A second option in reducing teacher costs is to increase the proportions of young, inexperienced and temporary teachers, with the effect of reducing the average salary paid. This may also be associated with an increase in the proportion of women teachers, who provide second family incomes and may be prepared to work at lower rates than men. Increased recruitment of young teachers is only a temporary expedient and has an effect as long as the average age is driven downwards. Inexperienced teachers and temporary staff (often untrained secondary graduates teaching in primary or lower-secondary schools) have been recruited in large numbers into some systems. Temporary savings can be achieved but they are difficult to sustain without increasing the proportion of untrained teachers to the point where they constitute the majority. Unless training is offered and an established post is forthcoming retention rates are likely to be low and motivation lacking.

Some savings may also result from the adoption of different mechanisms of teacher training. The orthodox pattern of three-year pre-service programmes with limited amounts of teaching practice in schools is expensive of trainee and staff time, particularly where all the costs are met for the training period. Training with much greater proportions of supervised school-based work adds to the complement of teachers and may incraese the utilization of teacher-training staff. This depends on adequate opportunities for school placement in supportive professional environments where there is some guarantee that trainees will learn the elements of good practice rather than merely replicate low-quality role models—a difficult criterion to meet.

Increased teacher utilisation. The third option, of increasing teacher:pupil ratios, can be widely observed. There are well-documented systematic attempts to do this, e.g. Projek Pamong/Project Impact in Indonesia and the Philippines which attempts to increase ratios dramatically by adopting peer-group learning, pupil-teachers and self-instructional pedagogy. Projections that it might be possible to work at ratios of one trained teacher to 200 pupils seem to have been over-optimistic. Considerable savings may be available through this route, perhaps to ratios more like 1 to 60 or 1 to 80. Such strategies depend on considerable amounts of organizational expertise and the efficient administration of self-instructional material as well as on a high level of pupil motivation (to the extent that one village headman involved with Projek Pamong found it an effective inducement to approve marriage only on the completion of requisite units of work!). They make considerable demands on non-salary recurrent expenditure. They also take disproportionate amounts of scarce trained-teacher time in administration that could be used for direct assistance to pupils with learning difficulties. Where there are parallel systems, in competition with schools with much lower teacher:pupil ratios, their advantages may not convince parents that they are more than a second-class alternative.

More common than this type of project is the upward drift of pupil enrolment without complementary increases in the teacher establishment. Teacher:pupil ratios have been increasing in many countries, particularly in those with the highest rates of

population growth, as it has proved impossible to keep pace with increasing enrolments. Thus in Kenya the adoption of the 8–4–4 structure for the education system has extended the length of the open-access cycle free of selection examinations, and created a potential increase in enrolments as a result of this fact alone of about 13 per cent in one year. Additional budgetary provision in money terms has been increased by only 11 per cent (less in constant prices), and 11,500 additional teachers have been budgeted for though more than 13,000 would be needed if class sizes were to remain constant.

Average class size is likely to rise unless teacher utilization, in terms of hours per week taught, is increased. Teacher utilization does vary widely. Probably the lowest levels for this are to be found in China, where class:teacher ratios are typically about 2.5:1 and are officially computed at 3.5:1 for the Key Point schools (3.5 teachers for every class being taught). Teacher:pupil ratios are modest, averaging about 1:25 at primary level and 1:17 at secondary. Teachers teach on average 10–14 periods a week of about an hour to classes which often exceed 50 pupils. In this case the large class sizes (which are likely to drop as a result of significant shrinkage in the size of an age cohort) are a direct result of the low utilization of teachers' time. Doubling the number of taught hours would halve the class size. But there are entrenched traditions which make it difficult to increase the number of taught hours. In other countries there may be scope to do this but increasing work-loads may have the effect of making teaching even less attractive. However, there is widely publicized evidence that school achievement does not depend on class size, within certain limits (e.g. Haddad, 1978). Nevertheless, very large class sizes undoubtedly restrict pedagogical options, e.g. by eliminating the possibility of practical work in science. They also discourage teachers, since the belief is widespread that the quality of teaching and learning is compromised when classes reach sizes where the only option is to lecture didactically.

All of these developments carry with them implications for the maintenance of school quality. They reduce the attractiveness of teaching as a career for able and motivated individuals, whose career prospects may be many times enhanced in other sectors of the economy where the tasks may appear more manageable to the individual. They undermine the morale of teachers whose

commitment and performance in the classroom depend heavily on their voluntary involvement in structuring learning in an accessible and stimulating way. They may become counter-productive economies if the proportion of time spent administering large cohorts increases at the expense of classroom-based teaching and direct contact between teachers and pupils. They may skew recruitment of teachers away from subjects with a special scarcity value, which are often ones where the needs are greatest and where the potential to contribute to relevant curricular experience in schools is most pressing.

Non-teaching costs. Expenditure on non-teaching personnel is generally a small proportion of total expenditure. This is because non-teaching staff at school level are usually very low-paid. The numbers of non-teaching professional staff—circuit education officers, subject advisers, inspectors, etc.—are small, though they occupy relatively senior and more expensive posts. The efficiency with which these groups undertake their duties is crucial to the maintenance of school quality. Residential-school head teachers know the importance of catering arrangements for the smooth running of their schools, though they are often less sensitive to the need for adequate technician support for technical and practical subjects. The effectiveness of the professional support, advisory and school-supervision system, which alone can monitor and intervene to maintain and improve school quality across regions and districts, is of paramount importance. If these services break down, accountability suffers and there is little or no basis on which to decide where quality is declining and no mechanism to implement remedial action. Reducing these cadres and compromising their effectiveness (e.g. by reducing travel budgets to zero and eliminating support for in-service work to support practising teachers) may damage disproportionately the school system. It is plausible that threshold effects do operate. When school-visiting programmes fall below a certain frequency, school inspection becomes sporadic and arbitrary, schools receive minimal advice and support for curriculum development, and when information on public examinations merely indicates the failure of high proportions of candidates with no information on why they failed, these thresholds may have been crossed. If school factors are an important determinant of school

achievement in developing countries (Heyneman, 1976; Rutter, 1980; Somerset, 1982) and it is possible for schools with similar catchments and resourcing to display large differences in performance, the importance of maintaining an infrastructure for monitoring and intervention is obvious. It also has the merit of being much less expensive to protect and develop than changes designed to effect teacher costs directly. It can have an impact on reducing these by increasing the morale, motivation, quality and utilization of teachers.

Cost recovery

A sixth proposition is that cost recovery and charging user fees is increasing in importance. This strategy was advocated in the Berg report on accelerated development in sub-Saharan Africa (World Bank, 1981) and in many subsequent reports on educational and social-sector financing. Several commentators (e.g. Colclough, 1983) have argued that the logic behind cost recovery for public services produces contradictions between macro-economic strategy and commitment to serving the basic needs of the whole population. In particular, they have questioned whether the quantity and quality of basic services can be maintained to rural populations when the costs are shifted to the individuals who use the services. There are several dimensions to the debate over cost-recovery strategies that need opening up for a full discussion.

Charging school fees. Charging fees directly to those who benefit from a service rather than indirectly through the taxation system is presumed to have at least two main kinds of benefit: improved accountability and increased resources. Arguably it shortens the chain of accountability between the providing agencies (predominantly schools) and the users of the service. It might be expected therefore that parents and pupils would value the quality of schooling more and place more direct pressure on schools and teachers to maintain it where the costs of provision fall more directly on them. There is a strong ideological element to this argument, founded on a belief in market forces to produce

results which are to the collective benefit. Fees for educational services may also increase the proportion of income allocated to education, since they may be levied in addition to a level of state subsidy. The situation where relatively wealthy parents pay twice for educational services is a familiar one: parents who elect for private education pay once through their taxes and again through school fees. They thus reduce the demand on the public system by withdrawing their children from it as a added bonus. This may create savings in the public-sector budget from reductions in enrolments in state schools. Where there is considerable effective demand for school places and a shortage of supply, parents are often willing to make sacrifices to keep their children in school and spend large proportions of family income to this end.

There are counter-arguments to these presumed benefits. They centre around the conflict between individual benefit and collective gain, the sophistication of user groups, the impact on participation of charging user fees and the nature of the service provided at different levels of cost. Taking these in turn, the motivation for increased accountability to user groups can be expressed in terms of the benefits parents and pupils hope to obtain from schooling. This concerns the expected returns to individuals in income and social status from the access to the labour market that educational qualifications and achievement provide. There is no necessity for this to result in maximizing collective welfare; an obvious example is education of women, which could have considerable impact on child nutrition, infant mortality and population growth but low rates of return if most women marry early and do not play an active part in the wage economy (assuming, as most economists have done in the past, that child-rearing etc. should not be accounted for in calculating returns). Similarly, the returns on achieving universal literacy to the individuals who acquire it last are likely to be low, but its social utility may be high in reducing malnutrition and disease. This kind of conflict is described by game theorists as the 'tragedy of the commons': what is in the interests of the individual is not in the interests of the collectivity (Hardin, 1968). Enhanced accountability also presumes that parents and pupils can discriminate between high- and low-quality educational services. Amongst those who have themselves not had significant school-

ing this seems unlikely; even amongst those who have, the quality of what they themselves received may result in ill-informed conclusions concerning the value of different methods of teaching and learning. This is a very complex set of issues partly bound up in cultural definitions of the nature of knowledge and the purposes of study. Where these are firmly grounded in the acquisition of factual knowledge and rote learning they are likely to be stressed to the exclusion of the development of more flexible higher-order cognitive skills widely considered essential for national development.

Impact on the poorest. Charging user fees is likely to have a disproportionate impact on poor families. These generally have more members of school age, have less disposable income and experience greater fluctuations from year to year in income than do rich families. Real per-capita income in more than half the countries in Africa is less than it was ten years ago. Unicef (1984) has argued that a 2–3 per cent decline in average incomes can easily result in a 10–15 per cent decline in the incomes of the poorest groups and an even larger reduction in disposable income. The result of user fees is therefore likely to discourage regular enrolment amongst this group and, in many societies, affect adversely the enrolment of girls from poor families where they are in competition for declining family income. It can be doubly inequitable in the sense that it may not only reduce access but also contribute to continued poverty since it will exclude the poorest from job opportunities that require educational qualifications that are positively correlated with income. Where user fees are encouraged they may also have an unequal impact on levels of provision. Institutions with relatively wealthy catchments may generate sums substantially in excess of those which they are obliged to recover. This increases the differences between schools in ways which favour the already advantaged.

These are serious objections which need careful consideration before policy decisions are taken. Several authors (e.g. Meesook, 1984; Thobani, 1983) have argued that some of the most detrimental effects of introducing or increasing user fees on the poorest groups can be offset by sliding scales of charges related to levels of family income. This is attractive since it seems to pro-

vide a mechanism to increase spending without necessarily increasing the burden on those least able to afford it. The practicalities of doing this, however, are daunting. Incomes are difficult to ascertain reliably in most developing countries, especially for those outside regular wage employment; the costs of administration may be such as to absorb much of the gain from charging fees (Ainsworth, 1984); school staff are ill-equipped to make discriminatory judgements about the wealth of families and unable to enforce payment without encouraging drop-out and souring relationships with parents whose co-operation they need. The political difficulties of introducing fees, whether they are means-tested or not, should not be underestimated either, since they are almost invariably unpopular and appear to undermine the widespread political commitments to 'free' education.

Some more research findings. It has been contended that a situation of low user charges and a low level of service may be worse from an equity point of view than one with high user charges and an expanded supply. Thobani (1983) has argued this in his work on Malawi. The reasoning for this is a little tortuous but essentially runs like this. Where there is excess demand for school places and insufficient public finance some individuals are denied the service and/or quality suffers. In both cases the rich suffer least: services are denied to marginal areas first (usually the poorest); and selection through examinations into limited numbers of schools correlates positively with the socio-economic background of students. If user costs are introduced at too high a level only a minority of the richest will be able to afford the service and equity again will suffer. If these propositions are true then Thobani argues that there is an optimal interim level of user charges that maximizes the opportunities for expansion and quality improvement at the lower levels (which benefit the poor most) without a significant deterioration in their limited access.

This is a convenient if not very convincing argument that posits equity in a parabolic kind of relationship with user fees rather than as a continuous linear variable. It is conceivable that this might hold where supply is greatly restricted and there is great unsatisfied demand and high rates of return for the successful. But it seems equally plausible that demand is not sufficiently

inelastic for modest user fees to have little impact on participation rates, which is a requirement of the model. The supporting evidence offered is that primary enrolment rates (but not secondary) are highest in the north of Malawi (100 per cent), which is the poorest region, and lower in the richer central (51.5 per cent) and southern (56.2 per cent) regions. This does indicate that enrolment is not simply a function of wealth. It does not exclude the likely probability that within those regions the poorest groups will decrease their relative proportion of enrolments with the introduction of user fees. Moreover, the argument that richer households with small stock and landholdings will prefer to capitalize on the opportunity cost of children's labour and withdraw them from school as fees increase (cited by Thobani in relation to Botswana (Chernichovsky, 1981) and assumed to hold in Malawi), is counter to the earlier assertion that 'it is generally richer people who utilize the subsidized service' to a greater extent. There is some evidence, however, for Malawi that enrolment of boys will be discouraged more than that of girls by user fees (Tan, Lee and Mingat, 1984), which may reflect opportunities boys have to earn income if they are not in school.

Thobani also argues that the 'wage compression' which results from an increased supply of (say) secondary-school graduates contributes to increases in equity—but this is only true if wage differentials are not simply moved up to the next level of relative scarcity. It attributes little importance to factors other than educational attainment in the determination of wage distribution. There is clearly need for great caution in accepting this reasoning, particularly where it is extended to countries with very different characteristics of demand, as Psacharopoulos and Woodhall (1985) recognize.

From another study based on Malawi data (Tan, Lee and Mingat, 1984) it is clear that progressive increases in school fees are associated with declining expectations of continued enrolment. The proportion likely to continue is higher among students with better-educated parents, from high-asset-owning families, from urban centres, and from more-developed areas of the country. Fathers' annual income has a positive effect on continued schooling at all projected levels of fee increase, though its influence appears to diminish at primary level as fees are raised. Willingness to pay increased fees varies directly with socio-eco-

81

Table 11. Expectation of staying in school (as percentage of current enrolled students) at different levels of fee increase for children from high- and low-asset households (Malawi)

Primary level				
Fee increase				
In kwachas	10	20	30	50
Percentage increase	48	196	344	640
Percentage staying in school				
High-asset	90.0	77.7	70.2	63.8
Low-asset	73.9	57.5	47.7	39.1
Secondary level				
Fee increase				
In kwachas	40	60	100	200
Percentage increase	33	100	233	567
Percentage staying in school				
High-asset	59.9	40.2	26.6	16.0
Low-asset	40.0	17.5	10.3	6.1

SOURCE Tan, Lee and Mingat, 1984.

nomic background in this study. The differences between expected participation rates of high- and low-asset-owning families are striking, as Table 11 shows.

In Malawi in 1981 primary-school fees in rural areas were raised by 50 per cent and in urban areas by 43 per cent for Grades 1–5, and by 15 per cent for Grades 6–8. Secondary fees increased by 50 per cent and boarding charges by 150 per cent in both cases after several years at the same level. By 1983 few children appeared to have dropped out of primary school as a result of this; at secondary level where the fees are much higher about 8 per cent of children from low-asset backgrounds had dropped out, and only 4 per cent from high-asset backgrounds. These low rates may represent a residual wish by parents and pupils to capitalize on sacrifices already made to support children through to secondary school. It remains to be seen whether the decline will continue or stabilize. There is evidence of some increased borrowing to support the increased cost of fees. The proportion of low-asset families citing increased school fees as the reason for borrowing increased from 50.6 per cent to 72.8 per cent between 1981 and 1983.

Recent work on Brazil (Behrman and Birdsall, 1983) concludes that it may be better to focus on providing better education to a smaller proportion of the age group than to expand provision to reach everyone. If the costs of keeping one child in school for six years are similar to those of keeping three children in school for two years the former is thought likely to result in greater net productivity gains. The most productive strategy, ensuring the highest economic returns to society's investment, is argued to be one where fewer children receive better-quality schooling. Fees can only have a limited impact on the problem. Birdsall (1982) argues that a doubling of urban-school expenditures could be achieved with fee levels at about 5 per cent of the reported monthly income of urban heads of households. In rural schools, where the need to improve quality is greatest, the fee levels that would be necessary are so high that they would not be sustainable by poor families. In the poorest areas only one-third of the poorest children attend school whilst nine-tenths of the richest do; any fee-levying would almost certainly worsen this uneven distribution. There is a danger that this kind of analysis undervalues the non-economic benefits of schooling. Even a few years of schooling may well be significant and they do represent progress towards development goals in the sense that they satisfy an effective demand. The multiplier effects of a modernizing environment on agricultural productivity gains (e.g. as illustrated by Lockheed, Jamieson and Lau, 1980) are more likely to be available where education is widely available. In their study of modernization, Inkeles and Smith (1974) show that the number of years of school experience appears as the most important predictor of modern attitudes generally associated with valued traits of employees.

Loans. Loans are another method of transferring costs from the state to individuals. The focus has been on higher education and little emphasis has been given to their use at lower levels. Many countries now operate some form of loan system. Woodhall (1983) identifies schemes in eighteen Latin-American countries and six in Africa and Asia (and there are undoubtedly more), but they seem to hold out little prospect of significant short- to medium-term savings. No loan programmes are fully financing and it seems unlikely that any can become so in less than twenty

years (Psacharopoulos and Woodhall, 1985). Loan programmes do work in the sense that they are utilized and that poor students do take advantage of them. However, the Colombian case (Jallade, 1974) seems to indicate that they may not be redistributive (since rich students make up the majority of loan-takers) and they may serve to channel public finance into private institutions (private universities benefited from the fees paid through government loans). There are also problems associated with the erosion of the value of repayments by inflation where fixed or zero interest rates are employed; and with defaulters from whom it may not be economic to recover loans through legal sanctions. If fees charged do represent close to the full cost of provision, loans can transfer costs to individuals in the long term, assuming repayment at close to real terms. But such arrangements are politically unpopular, since they involve significant initial costs in setting-up and administration well in advance of any possible savings. They also oppose common perceptions of the sacrosanct nature of free-education policy, though this invariably conceals the reality of regressive subsidy to the relatively wealthy.

Private education. There is very little useful or detailed data on the distribution of private and public educational provision in most developing countries. Psacharopoulos and Woodhall (1985) suggest on the basis of this that there is more provision at secondary than at primary level, that it has been declining rather than increasing in the recent past (with some exceptions e.g. Tanzania), and that public subsidies for private institutions vary widely from country to country. Even these general conclusions are based on unreliable data and it would seem unsafe to place much confidence in them for policy purposes. Private educational provision should not be ignored in the planning process, though commonly it is, since it is seen as largely outside the control of the state. Until there are sufficient data to understand what kind of contribution it is making and to which social groups, its relationship to public-sector problems of maintaining levels of provision in austerity must remain unknown.

In conclusion. From this discussion it can be seen that there is some scope for the use of various kinds of user fees to increase the resources available to education. This seems greatest at high-

er-education level where the unit costs and subsidy levels are greatest. The clientele of higher education are from wealthier backgrounds and are likely to enjoy high lifetime earnings. As at any other level, any movement towards charging fees to individuals must be accompanied by compensatory mechanisms that ensure that the less privileged are not excluded by price from participation. The administrative arrangements for ensuring this seem most practical at higher-education level, and are difficult to envisage for typical primary-school systems in most developing countries. Very modest fees may be charged for primary education but even these may be sufficient to worsen equity and access for the poorest.

Underlying the debates about user fees and the proportion of provision that should be allowed or encouraged to fall on private as opposed to public resources are political and ideological judgements that differ from country to country. These centre on the appropriate role of the state in providing a service and the limits to revenue generation through taxation. Charging user fees is equivalent to increasing the level of taxation, in the sense that it is a compulsory contribution to revenue. It tends to be different in the sense that it is typically at a flat rate rather than progressive with income. If it is not then its administration becomes very complex. There is therefore a lot to be said for considering first whether there is scope to increase revenue through increases in taxation that are progressive with wealth and/or are concentrated on luxury goods before introducing substantial user fees. If there is a genuine commitment by the state to educational provision as a basic need and to increasing equity, then this is the obvious strategy. It may be true that parents will part with a greater proportion of their disposable income if they feel they are contributing directly to their children's education; however, encouraging this will tend to increase differences in provision between socio-economic groups and run counter to any view of the role of the state in limiting such inequalities. Nothing has been said here of the social divisions that characterize some established education systems which have historically divided public education of the majority from the private education of an élite minority. Rationing access to the governing élite through social and financial mechanisms may well have proved functional for such societies in the past and self-justifying to their pro-

ducts. The privilege they sustain may be fragile when associated with economic recession and increasing differences in available resources between public and private sectors—but this of course is a political as well as social judgement.

Donor dependence

Budgetary restraint in the public sector may increase the proportion of educational expenditure that is externally financed. Across all developing countries external aid to education on average seems to amount about 9 per cent of total education budgets (World Bank, 1980*a*). Weiler puts the estimate lower, at 6.4 per cent in 1977 (Weiler, 1983), with wide variations between countries. Throughout Latin America between 1962 and 1977 external contributions to physical investment in education averaged 13 per cent, and they seem to have been a decisive factor in some, especially in determining the balance between levels (Psacharopoulos and Woodhall, 1985).

There are several possible consequences of increased donor support (Damiba, 1980; Weiler, 1983). First, the majority of capital and developmental budgets may fall under some level of external control. This invites problems related to the conditions under which such finance may be provided and the difficulties of reaching agreement on the sectors that should be supported. It also has another set of consequences that derive from the preference most donors show for this type of support (Colclough, Lewin and Oxenham, 1985). Capital investment carries with it direct local costs (thus increasing the demand on domestic resources), and recurrent implications for continued support. The accumulation of externally financed capital projects may therefore deepen the problems of maintaining public expenditure levels by increasing recurrent demands. This does not, of course, negate the rationale for such investment; it does suggest that such investment may be compromised by subsequent inability to meet recurrent-cost implications arising from the employment of additional staff etc.

Increased donor inputs may also distract the energies of talented administrators from the mundane but essential purpose of providing efficient services to existing institutions. The attrac-

tions of involvement with high-profile, externally funded projects may be compelling, since they may offer individual (e.g. foreign travel) and career benefits. A calculus of opportunity and costs may suggest that more revenue can be generated through well-articulated proposals to donors than through painful re-examination of the domestic opportunities to increase taxation, fees or the share of public expenditure that the education budget takes.

In countries where budgetary restraint is severe, innovation and curricular improvement are only likely to be possible on a significant scale with some measure of external assistance. Donors have been prominent in supporting the development of new curricula over the last fifteen years, and the adoption of new science curricula throughout the world (Lewin, 1981) provides a good example of the mechanisms that have been employed. Dependence in the initiation and implementation of such innovations carries with it certain risks. There may be conflicts of interest between commercial publishers and national and international agencies; the most recent orthodoxy on the teaching of particular subjects may translate poorly into the conditions of developing-country education systems; differences between high- and low-quality schools may be exacerbated by high rates of curricular change. Psychologically it may also have a cost in reducing confidence and commitment among creative and innovative nationals whose contributions may be given lower status than those of donor staff.

The problems of increased donor dependence are the same as those associated with the receipt of any external assistance that is not a free good. They are heightened when donor support begins to condition policy rather than respond to it. Enlightened self-interest may characterize relationships between donors and recipients: nevertheless it is easy to share Weiler's (1983) reservations about the use of educational aid as 'compensatory legitimation' to support foreign-policy objectives of donors and delay domestic changes rather than promote them.

Long-term damage

A final proposition concerns factors which are less tangible than those already described. Austerity has consequences for at least

three of these: the medium- to long-term nature of effective educational investment; the morale and motivation of teachers; and the value given to the non-economic benefits of education.

Educational planning must concern itself with medium- and long-term horizons. The time taken for major investments in physical capacity from conception to mature operation may exceed twenty years in the case of higher education, and benefits are likely to accrue over even longer periods. Secondary schools may be established in shorter periods of time, though the need for much greater numbers of them prolongs the planning horizon needed. The ease with which buildings may be erected to serve as primary schools may be deceptive in that their effectiveness depends on an adequate supply of trained and motivated teachers. It is extremely difficult in short periods to create large new cadres of competent teachers with adequate back-up services. This reality meshes poorly with the political imperatives to act and is threatened by the pressures of the immediate need to manage crises as they occur. In a very real sense this precipitates subsequent crisis, as the underlying causes are never identified or resolved. If the short-term perspective does dominate, educational development will proceed from one spatchcocked solution to another in ways that are more likely to reflect the interests of powerful minorities than the interests of the state in ensuring progress towards social and economic goals over which there is some consensus. Austerity also discourages rather than encourages cross-sectoral initiatives in education, since they require resource inputs from competing agencies. A broader view might see benefits outweighing the initial costs to particular budgets if accounting conventions were modified.

There is no simple way of measuring morale and motivation, though it is not difficult to think of proxy measures that give some indications of these. Few longitudinal studies exist that would show changes over time and most evidence is anecdotal and piecemeal. There is a widely held view that morale and motivation do suffer where physical resources are deteriorating, salaries decline in real and relative terms, and teachers are placed under unrealistic expectations of performance. It would be surprising if they did not. Rapid expansion also may bring with it critical problems of leadership resulting from the accelerated promotion of marginal candidates to positions of responsi-

bility for which they have no training or special affinity. Yet leadership skills are pivotal in mobilizing staff and enthusing them to perform effectively. Austerity may therefore dangerously undermine the psychological contract that enables teachers to work to the spirit rather than the letter of their contracts of employment.

Lastly, it is important to draw attention to the non-economic benefits that are associated with education. These may be undervalued in austerity because they are difficult to define and because they may be seen as incidental rather than central to educational provision. Parents do not send their children to school and bear the costs of this only because they anticipate a return on their investment; children do not study only to pass examinations and gain qualifications. All societies value knowledge and wisdom and set a store by the artistic, technical and social culture they are part of. It is this that gives value and meaning to the quality of peoples' lives. Curiosity, imagination, initiative, self-realization are all important attributes that can be and are fostered through education and through schools. These may or may not make contributions to productivity but they also have their own intrinsic value to the communities that regard them as desirable. It extends beyond the scope of this paper to delve deeply into this area. It must be a concern that austerity may bring with it an emphasis on the utilitarian and on instrumental learning directed towards narrowly defined and occupationally related outcomes, and in the process begin to value the means to an end rather than the ends themselves.

V. Breaking the mould: constructive responses to austerity

The analysis offered here argues that there is a new climate for educational planning in many developing countries. Resources are less readily available than in the past to support further expansion and quality improvement. Austerity has brought with it serious and often unintended consequences for educational quality and equitable provision. Educational provision for vulnerable groups is especially threatened by contraction of available resources. There is therefore a pressing need to develop strategies for coping with level or declining funding which minimize the erosion of the gains of the last two decades.

The new climate

Changing conditions. Changed expectations of growth, greater uncertainty about the future and the increasing rate at which changes are taking place combine together to alter the organizational climate for planning. Expectations of the future are central to the planning process. The optimism displayed in educational planning in the 1960s, with expectations of continuous growth in enrolments towards universal provision while maintaining or improving quality, now seems difficult to sustain. Economic growth has not been sufficient to provide the resources, and the development that was presumed to follow from greater outputs of educated manpower has not been rapid enough to keep pace with demand. Expectations of growth are now more pessimistic and few suppose that providing more places in schools and uni-

versities will of itself transform short-term prospects for economic recovery. There is an emerging consensus (see Chapter II) that the outlook for educational investment is much less favourable now than in the past, especially in the poorer developing countries. This will condition decision-making.

Planning must now take place in a situation of greater uncertainty. The lessons of the last decade for the poorest countries are compelling evidence that medium-term plans are vulnerable to changes outside the direct control of national governments. The 'oil shocks' of the mid- and late-1970s are perhaps the most obvious examples of this. Developing countries with no oil-producing capability suddenly found themselves having to allocate much greater proportions of their public expenditure and scarce foreign exchange to energy imports, financing this by large-scale borrowing and/or transfers of money from other expenditure headings. Reducing the consumption of imported energy significantly was a very difficult proposition for most—politically unpopular and almost certain to damage the transport infrastructure on which government services and growth in economic activity depended. At the same time prices for many primary commodities fluctuated widely against underlying downward trends. External changes can have very considerable effects on the economies of relatively small countries dependent for foreign exchange on a restricted range of primary commodities; they can also dramatically affect the taxation base that governments use to generate revenue. It is characteristic of educational expenditure in many developing countries that it has fluctuated widely from year to year, without necessarily following a long-term trend. This is clear from the Unesco (1985) analysis of country trends and is especially prominent in African countries, many of which have been amongst those affected most by recession, violent price fluctuation and unstable exchange rates.

Changes with which the planning process has to cope have become more rapid than in the past. There are several reasons for this. Stability or the expectation of growth reduce the need for rapid decision-making: on the one hand, with stable funding opportunities will not change much from day to day; on the other, growth ensures that opportunities that are not taken advantage of today are still likely to be options tomorrow. Contraction is different. Where decisions have to be made that are detri-

91

mental to groups or interests within an organization they are unlikely to be widely discussed. To do so is to invite infighting and opposition destructive of morale. They are therefore more likely to be announced with little notice, with the intention of shifting attention to their implementation and coping with their immediate consequences. The most extreme forms of this occur when ministers are informed of cuts they will have to make and left to implement them. This puts a premium on 'damage limitation' and it then becomes important to begin to understand whose interests are most threatened by cuts: the organizations and the people who work within them or the clients they serve.

Rapid change may also be encouraged by the growth in sophistication of monitoring and accounting systems. Information technology, where it is applied effectively, can dramatically increase the flow of information to decision-makers. Financial systems have been amongst the first to adopt methods for accumulating and monitoring information at high speed. Performance characteristics of education systems in developing countries are generally not available from an updated data base; where they are the reliability of much of the input may be suspect. Much that is of interest cannot readily be translated into quantitative data. The point here is that though there will always be differences in quality and availability of data, the introduction of information technology may alter the balance of access and accuracy of the information which decision-makers employ in ways that will change decisions for these reasons alone.

Cultures of choice. The nature of changes in organizational climate associated with austerity have been explored in detail by Hewton (1986) on the basis of experience within the UK. Hewton develops Handy's (1976) notion of organizational cultures which stem from the 'deep-seated beliefs about the way work should be organized, the way authority should be exercised, people rewarded, and people controlled'. From this he develops a matrix of 'cultures of choice' to represent different frameworks within which decision-making takes place. These are illustrated in Figure 5.

Hewton argues that policy decisions are made within organizational cultures that reflect the prevailing perceptions and expectations of the societies of which they are part. Two dimen-

	GROWTH	CONTRACTION
Uncertainty	*Laissez-faire*	Crisis
Certainty	Planned growth	Cuts

FIGURE 5. *Cultures of choice*

sions—certainty/uncertainty and growth/contraction—are the major determinants of these cultures. A *laissez-faire* culture, associated with growth and uncertainty, is characterized by economic projections which present an optimistic view of the future. Planning proceeds on the expectation that more resources will be forthcoming. Innovation and experimentation are encouraged. Political, organizational and financial factors combined in the 1970s to transform the planning culture in the United Kingdom to one of planned growth. The first of these saw politicians take a more active role in planning the education system, seeing it as an opportunity to 'socially engineer' away some of the inequities of the past and use changes in it to fuel 'the white heat of the technological revolution' that was planned for the British economy. Organizational forms tended towards greater corporatism and rational decision-making based on 'consideration of all the relevant variables'. Financial accounting systems were introduced—cost centres, programme analysis and review (PAR), critical-path analysis (CPA)—which enhanced accountability. Planned growth was replaced in the United Kingdom by a 'crisis culture' in the late 1970s which sought to adjust to restricted funding, a loss in confidence in the benefits from educational investment and a decline in pupil numbers. What started as 'judicious pruning' as a response to reductions became insufficient to meet the need for savings and this, arguably, has led to the emergence of a 'cuts culture' based on a sense of certainty that some contraction in services provided is inevitable.

Though this model was developed to understand changes in the United Kingdom it clearly has relevance to the concerns of this paper. There are obvious differences between what Hewton describes and the changing conditions of planning in developing countries. In most, since the 1950s, there was no period when resources for education were growing faster than demand; many developing countries have highly centralized education systems

in which the interplay between national policy and local provision is fundamentally different. The national culture of decision-makers in developing countries is different to that of the United Kingdom. Nevertheless, there are similarities. Much educational planning in the 1960s was recognizably *laissez-faire* in character. Coombs (1970) makes this clear and argues that

> these (developing) nations were not equiped to do the kind of educational and manpower planning that the situation required... it was clear even to the most ardent believers in *laissez-faire* that they would have to plan their way carefully to make the best use of their acutely scarce resources.

Educational planning in Coombs's view had historical traditions that were short-range, fragmentary, not integrated with social and economic needs, and based in static rather than dynamic assumptions about the future. The subsequent growth and widespread use of manpower planning falls clearly within the assumptions of planned growth. Its adaptation to a climate of crisis, in those countries suffering from recession, and its possible translation into a 'culture of cuts' as an organizational feature of future planning is what now needs exploring.

A culture of cuts. Organizations where growth stagnates or becomes negative are likely to exhibit a number of features. Fairly obviously, morale may suffer when planning within severe restraints on growth replaces planning new initiatives alongside the maintenance of existing services. The apparently mundane replaces the excitement of new developments. The calculus of reward changes to affect the motivation of staff towards the conscientious prosecution of their duties. Under conditions of growth staff who can creatively plan provision in new ways and who initiate projects are the most visible and the most rewarded by promotion and additional responsibility. Contraction places a premium on savings over budgeted expenditure and those who are best at identifying and justifying these may attract most recognition. The negative rather than the positive response becomes the reflex of the successful administrator, who may be applauded (more often by superiors than peers) for finding ways of reducing allocations.

Thus a 'culture of cuts' will normally tend to take a short-term view and look for immediate savings, devaluing the long term

because of the uncertainties involved; it will be conservative towards change and seek to minimize cost within the existing structure of provision to the point where this ceases to be viable; it may then encourage radical reconsideration of provision to transfer costs away from its own budget; it will value economy over improved access and equitable distribution of services; it may support the development of a 'siege mentality' where the focus is on eking out existing resources rather than generating new ones from outside its immediate institutional environment. Metaphorically it waits for the cavalry to ride over the horizon to its rescue in the tradition of the Wild West (perhaps a forlorn hope if it is significant increases in external assistance that are being sought).

Goal displacement is another feature of organizations in stress. Normative consensus on institutional goals may be replaced by the overriding needs of members of the organization for self-preservation. The source of stress may not be as extreme as a direct threat to future employment. Where public-sector salaries are eroded to levels below a normal living wage, individuals will seek outside employment whilst retaining government jobs. Their performance and commitment suffer accordingly. The 'tyranny of small decisions' made by individuals in their own interests may come to undermine the collective capacity of the organization as a whole for efficient operation. Government employees undertaking one or more jobs outside their main employment is an endemic occurrence where salaries are lowest (e.g. in Indonesia).

Planning within stable budgetary ceilings has another psychological aspect that is important. Under conditions of growth the bargaining process that takes place within and between spending units is one where the majority of participants can have the satisfaction of seeing allocations for those areas to which they have a special commitment growing year by year. There will be losers as well as winners, but more of the latter. Where areas of activity do wither according to changing priorities, staff involved are likely to have time to adjust and redeployment is generally possible. Converting the bargaining to a zero-sum game where every gain must be another's loss sharpens competition and may damage collaboration and the free flow of information between departments and sectors of activity. Real contraction further

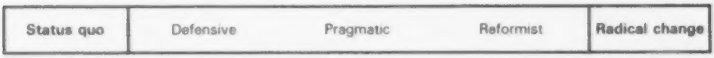

FIGURE 6. *An emerging cuts culture*

increases the number of losers and raises the stakes. Redeployment becomes more difficult and the contraction of an area of activity may invite further reductions. The same arguments may be employed that led to the decision to begin reduction; they may be more compelling as the unit concerned becomes smaller and more marginal to the whole.

Hewton argues that a 'cuts culture' emerges where there are extended periods of marginal contraction and there is a reasonable certainty that they will continue. Cuts cultures are not initially stable since they are accompanied by three types of responses which come into conflict with each other (see Figure 6). A defensive response resists change and seeks to reinstate the status quo whenever it is challenged; pragmatic responses accept the unpalatable restraint necessary and seek to accommodate to these in the most painless ways; reformist stances reflect a willingness to move outside existing assumptions and seek radical ways of changing aims, attitudes, structures and procedures to cope with a new environment. These positions may coexist within an organization and within the individuals who comprise it, precipitating conflict, disagreement and instability as they develop. There is intuitive logic to this analysis and elements of it will be familiar to all those who have been associated with systems and institutions changing from growing to level or contracting resourcing. The current debate on the resources available to education in developing countries displays elements of all three of the positions outlined. Defensive arguments are widely employed to maintain provision at least at its current levels, despite deterioration in some countries in the ability to finance this. Pragmatic approaches accept such deterioration and stress the need for structural adjustments to enhance the prospects for future returns to growth, whilst exploring the range of options to make the best use of available resources and the least-damaging methods of creating savings. Reformers question whether adequate provision is a realistic possibility under existing assumptions about delivery systems and try to identify alternative and

most cost-effective methods that go well beyond incremental change.

The extent to which a 'culture of cuts' does develop within ministries of education in developing countries is partly dependent on the severity and duration of fiscal restraint. It also depends on beliefs about the future: a crisis exists if a critical mass of people feel the situation is sufficiently serious to warrant this kind of description. These beliefs are a function of context: what is a crisis in provision in one country could easily appear as a normal state of affairs in another. Relative changes over short periods are the important factor and some countries have certainly experienced these.

Planners and paradigms. Planning, like any other intellectual activity, usually takes place within a dominant paradigm. A paradigm, as Kuhn (1962) has explained in relation to the development of science, consists of a framework of assumptions, ultimately founded on beliefs, which identifies valid questions, suggests methods for their exploration and influences options iden-

SOURCE Burrell and Morgan, 1979.

FIGURE 7. *Paradigms of social analysis*

tified for the resolution of problems. Burrell and Morgan (1979) have extended this kind of analysis to classify traditions in the social sciences according to two dimensions: regulation–change and subjective–objective views of social reality. Figure 7 presents a simplified model illustrating this.

The current orthodoxy of educational planning is located in the area bounded by increasing regulation and relative objectivity. Thus, for example, most of the eight approaches to planning the links between education and employment classified by Little (1986) would fall within these limits. It is within this functionalist paradigm that organizational theory has been most highly developed and the application of systems analysis most extensively attempted. It is the framework most obviously applicable to bureaucratic systems. It offers the promise of rational planning methods that can be applied to systems which can be objectively defined and managed to achieve goals about which there is consensus. It eschews radical change in favour of incremental improvement. These are merits which should not be undervalued and cannot be directly contradicted from arguments located in different paradigms of social analysis.

Functionalist analytical frameworks are at their most powerful when used under conditions of stability or slow change, consensus of purpose and a high level of shared meanings (one definition of 'objectivity'), a defined and relatively certain locus of control, and rational decision-making based on explicit criteria. Whether education systems in developing countries meet these criteria is, of course, a judgement conditioned by the paradigmatic commitment of the analyst. It is clear that educational experience and the quality of its delivery have strongly subjective elements; the same type of provision will be experienced differently by different individuals and groups. Radical change may be a necessary requirement to improve provision, though administrative regulation and incremental change is seen as a primary function by the providing agencies. The balance between the internal and external factors influencing decision-making, and the controllability and uncertainty of their nature, may be changing as austerity bites deeper. The locus of control may be receding from its accustomed place. As Merton (1968) and others (e.g. Blau's (1955) study of government organizations) have pointed out, conformity to regulations, a primary charac-

teristic of bureaucratic organizations, may be dysfunctional for realizing organizational goals and effectively delivering a service to a target population.

The analysis could be extended, but not without an extensive excursion into the literature on organizational analysis and the bases of social theory which is inappropriate here. Its importance is in drawing attention to the 'taken for granted' nature of the framework within which much planning takes place, significant questions are identified and analytical procedures are developed. There is no strong suggestion here that planners can somehow break out of the paradigm within which they are used to working. Indeed, Kuhn's (1962) work on scientific revolutions suggests that paradigms die with their proponents more frequently than their adherents experience a kind of 'Damascus effect' which changes their world view. Rather the lesson that can be learned is that there is scope to explore the boundary areas between paradigms in ways that can enrich the quality and range of inputs into the planning process. A well-known example of this is the development of work within an 'action frame of reference' (Silverman, 1970) which develops an interactive view of social reality that balances subjective and objective viewpoints. From this perspective meanings are given by people to social constructs, and shared orientations become institutionalized and experienced by subsequent generations as social facts. Through their actions people can change these shared meanings but they do so within a 'negotiated order' which constitutes social reality. The planner concerned with educational quality can learn a lot by exploring from this perspective how the actions of participants both shape and are shaped by the systems of which they are part, rather than assume that there is a singular sense in which quality can be unilinearly defined and developed.

It has been argued that austerity is likely to affect the 'culture of choice' within which decision-making occurs. This will determine what are considered valid questions to ask, how they are analysed and what range of solutions is considered legitimate. Action to overcome educational problems is dependent on the values that inform analysis and the intellectual traditions within which they are perceived. Planners have a responsibility to question how appropriate their own frameworks of assumptions are as conditions change.

Recovering the initiative

The room to manoeuvre. The first stage in this process should be an appraisal of the 'room for manoeuvre' (Lewin, 1985*b*; Seers, 1983) that exists in development policy. The more restricted this is, the more options will seem foreclosed and the consequences of austerity inevitable. Judgements on the room to manoeuvre in development policy must take into account limitations imposed by geographical size and location, population growth and magnitude, ethnic and linguistic diversity, accidents of natural-resource endowment, established political and cultural traditions, distribution of goods and services and the pattern of economic activity. The room to manoeuvre in education policy is circumscribed by parameters which include: the existing level and distribution of provision (small systems can respond to change more quickly than large ones, inequitable access is an issue in some systems but less so in others); the quality and quantity of available educational manpower (chronic shortages of teachers create different constraints to maintaining quality than when there are surpluses); the characteristics of demand for schooling (excess demand changes the balance of priorities from those operative where demand is largely matched by supply); relationships between labour-market practices and educational qualifications (where qualifications provide the only access to modern-sector jobs, selection pressures may constrain curriculum change).

Weiler (1985) echoes a similar concern when he argues the importance of

> a realistic assessment of the stability and resilience of a country's overall resource base and an understanding of the economic and political factors that might endanger that stability (such as world price fluctuation or armed conflicts); a 'map' of the political weights of competing claims on the resource base, which would involve an assessment of the political strengths of different ministries and other public agencies and their leadership; and a reading of the seriousness with which the country's leadership is committed to the aspirations that are embedded in the educational plan.

A chart of factors that influence the room for manoeuvre for an education system is developed in Figure 8. This selects seven

DIMENSION	INDICATORS
Budgetary possibilities	Public-sector budget projections Percentage share of allocations to education Distribution of expenditure (level, type) Other financial resources (user fees, levies, private organizations) Locus of control of resources Availability of donor assistance
Manpower availability and quality	Trained teacher numbers Training system output Teacher turnover and wastage Deployment patterns Expatriate numbers
Political priorities	Universal primary/secondary policy Medium of instruction Inequality reduction Rural development Industrialization
Size and dynamic characteristics of education	Enrolment ratios and numbers at different levels Population growth rates and distribution Administrative infrastructure School plant distribution and occupancy levels
Pressure for access to schools	Size of modern-sector growth rates in employment of different types Levels of income inequality Employers' recruitment practices Rural subsistence levels
Culture and history	Teachers' status and roles Religion Authority structures Legitimation of inequality Colonial experience
Geopolitical relations	Strategic significance Power-block relations Economic interdependence

FIGURE 8. *Assessing the room to manoeuvre*

dimensions on which to begin to map the territory over which assessments need to take place. This framework can assist in creating a policy environment which is not limited by the rule-bound and role-orientated behaviour of bureaucratic systems. In particular it can help distinguish between options that are closed by conditions outside the immediate control of government and those that it is convenient to cast in this form but which are really constrained by a lack of political will. It may also assist in avoiding the trap of assuming that virtually any conceivable

action is capable of implementation if thought desirable by central policy-makers.

Beliefs and assumptions. An important part of the process of determining the degrees of freedom within which policy is formulated is concerned with values and beliefs. Educational planners must be aware of, and seek to influence, beliefs and assumptions that inform macro-economic policy (Lewin, 1983). This implies the strengthening of cross-sectoral perspectives that allow the case for educational investment to be made convincingly when there is strong competition for resources. This argument reinforces Ahmed's (1985) desire to place more emphasis on the integration of educational planning with that in other sectors. Planning at the aggregate level is a political, administrative and bureaucratic process as well as a technical exercise in the optimization of inputs and outputs. It represents a process of negotiation through which the pressures on both the ability and willingness to allocate resources are balanced. It is crucial that planners do make effective use of evidence which dispels some of the casual disaffection with the results of educational investment in the past.

The positive effects of education under certain conditions on agricultural productivity, on some types of informal-sector work, on fertility and on health and nutrition are documented and need publicizing and further confirmation. There is much suggestive evidence on the importance of schooling for the development of non-cognitive attributes. These are argued across the political spectrum as being central to the development of more productive economic systems. The record of educational development in satisfying needs is no more equivocal than that of many other sectors and the catalogue of expensive failure is no more alarming. Examples are not difficult to find of massive programmes of investment in agriculture, irrigation, industrial infrastructure and import-substituting manufacturing which have not succeeded in satisfying developmental needs.

Criticisms of educational spending need to be countered both in comparative terms and in relation to misinterpretations of the benefits that have resulted. The latter might include observations that the export of educated workers is not always a net loss if repatriated earnings are substantial; rates of return, with all their

imperfections, may have declined but they are often still higher than for other forms of public-sector investment; costs can be controlled if the political will to do so exists; redistribution of opportunity and achievement has improved in many systems; many more pupils acquire some basic education and literacy and numeracy skills than in the past; school quality can be dramatically improved in low-cost systems without increasing unit-cost levels to those found in the most privileged institutions. Declining school quality cannot be overcome if the problem is located solely within the providing institutions. The mistake of some earlier generations of educational planners was to offer panaceas which responded to the vagaries of social demand too readily, and were not integrated with action on other aspects of socio-economic development. These are centrally concerned with how societies select, allocate and reward the products of the educational process.

Education as investment or consumption. Economic planners may also be culpable of having an ambivalent attitude to education. Economists with an interest in education have placed great emphasis on education as an investment good that could be treated similarly to other forms of investment. But they have tended to be marginalized by mainstream economic thought that has usually regarded educational spending as consumption. Thus in common with many other economists concerned with national accounting, Hicks and Kubisch, cited earlier in relation to the vulnerability of public-sector spending, regard a preference for social-sector spending as equivalent to one 'for present consumption over investment and future consumption'. This illustrates the convention that educational services should be treated as a form of consumption, not investment that is in many ways equivalent to that in the 'productive' sectors of the economy. The importance of investment in production presumably resides in the value given to future consumption, but it is not clear how this is attributed greater value. The difficulties this creates for educational expenditure were emphasized by the late Dudley Seers (1983):

> If education were treated as 'investment' the definition of government current expenditure would have to be changed, and savings would have to be redefined. When orthodox economists (Chicago

or Marxist) criticize deficits in government current accounts they overlook the fact that education is only a 'consumption' item and appears in this account because of conventions that are quite artificial. This imparts a bias against education in budgetary policy—though not as much as in the Marxist set of definitions that leaves education out of the product too.

Views of development which value the satisfaction of needs that are not only material in nature have become more fashionable. The rationales given for educational investment in national development plans reflect this broadening of perspective (Lewin, 1985*a*). These need constant reiteration if they are not to be eclipsed by pragmatic emphasis on short-term benefits. Claims for more and higher-quality educational provision that can be made on intrinsic grounds are still dismissed as contributing to non-productive consumption—though, of course, the end product of much industrial investment can only be justified ultimately in terms of higher levels of consumption of goods and services. Many of these might be thought of lower priority than meeting educational needs which could contribute to deeper levels of satisfaction than the acquisition of, say, consumer electrical goods of dubious utility. What is labelled consumption is in any case somewhat arbitrary if benefits are perceived in the longer term and have strongly qualitative aspects to them. Self-development and active rather than passive engagement with national development priorities are surely stimulated through adequate educational provision and are themselves a form of development.

Structural drift and sensitivity analysis. Structural factors are likely to be more important than they have been in determining changes in the distribution of the resource allocations that are made. Budgetary drift as a result of administrative convenience and the asymmetrical qualities of different types of expenditure is a real possibility, with unintended, but not necessarily unpredictable, outcomes. Some forms of expenditure will prove much more 'sticky' than others on the downswing and this may shift priorities in an unplanned way. Sensitivity analysis, grounded in detailed understanding of the qualitative impact of restricting resource allocations, is critical to improvements in internal efficiency which does value qualitative aspects of output. For this,

criteria need to be established against the impact of changing levels of resourcing that can be measured in at least three dimensions: school quality, equity and efficiency. These things cannot be defined universally and must be developed in a system-specific way.

The current state of the art is embryonic, serving to emphasize the importance of making progress with this task. Thus Heyneman's (1983*b*) attempts to compare primary-school quality within high- and low-income countries adopts a definition of quality dependent on a high level of educational 'product', influenced heavily by levels of academic achievement. The in-school characteristics that contribute to this are of two kinds: monetary (e.g. expenditure per pupil, textbooks per pupil, availability of a library); and managerial (e.g. hours of homework, frequency of parent/teacher conferences). In this study, measurable factors such as these were regressed against school achievement and those that had predictive power retained and cumulated into a composite index of quality. In the Behrman and Birdsall (1983) study, a simpler index of quality of schooling was used, depending on the average number of years of education of teachers.

These studies raise a number of issues. First, the choice of dependent variable is crucial and it may be that academic achievement or teacher education is not the most appropriate. They have the advantage of easy availability but the former represents a small part of what most schools would claim to be trying to achieve. The latter supposes a great deal about the relationship between teacher competence, motivation and teachers' years in school. Their variation also needs careful control for out-of-school factors and interactive effects that may obscure variation resulting from in-school factors. Secondly, there are analogous problems in the specification of independent variables, the choice of which will partly determine how much variation can be explained within the model and to what it is attributable. Third, though qualitative features of schools can be measured by proxy and expressed in a quantitative form, there are limits to this process. This is particularly true at the level of explanations for changes and their effects which depend on an understanding of process and the social organization of schools. Fourth, considerable technical sophistication is necessary in data processing and interpretation if spurious variation is to be separ-

ated from real effects. If these problems can be overcome then it becomes possible to examine the impact over time of changes in the independent variables, particularly those which are affected by budgetary restraint.

The same principles can be applied to other dependent variables, apart from those which measure school quality. These are likely to include equity, internal and external efficiency, and progress on nation-building which is a prominent feature of the rationales given by governments for resource allocation to education (Lewin, 1985*a*). A preliminary specification of these might be developed along the lines illustrated in Figure 9. No one would pretend that these procedures were simple. Iteration of the models used to improve their power would undoubtedly be necessary, but there are few other obvious alternatives to moni-

DEPENDENT VARIABLE	DATA SOURCES
School quality	Achievement analysis (examination results) Teacher education/qualification Inspection reports Attendance rates (teachers and pupils) Classroom research Curriculum analysis Project evaluations In-service/on-service feedback Clients opinions (pupils and parents) Equipment/materials provision Class size
Equity	Participation rates Promotion patterns Performance on selection tests School-quality variations
Internal efficiency	Unit costs Drop-out/repetition rates Building/equipment utilization Teacher deployment
External efficiency	Labour-market absorption Tracer studies of school-leavers Employer/employee interviews Skill inventories Survey of formal/informal/traditional sector employment
Nation-building	National language acquisition Awareness of ideology Institution-building Localizing expatriate posts

FIGURE 9. *A possible framework for sensitivity analysis*

tor the impact of austerity. In their absence it is almost certain that decisions will be taken which will result in small savings and substantial deterioration in the quality of provision.

Conditions for effective planning

Rational decision-making. Planning assumes that there are rational procedures that can be adopted to allocate scarce resources effectively. Its use depends on a number of conditions being satisfied. The first of these is that decision-making on educational policy is not the result of political whim and short-term electoral expediency. If it is, its contribution may be limited to the selective legitimation of policy, whilst inconvenient and embarrassing evidence that policy is unlikely to result in the achievement of goals may be suppressed or simply not produced. Experience in Thailand (Ketudat, 1985) illustrates the danger that:

> If the spheres of policy and research overlap too much it is easy for the research to become the tool of the power structure, with studies serving only as legitimization and as a façade to rationalize what has already been decided.

Examples are not difficult to find of policy decisions that do depend on the accidents of personality and political process that reflect special interests and short-term gain. However, the complexity of education systems and the inertia they exhibit limit the amount of influence that individuals can have. Arbitrariness in decision-making must extend to conspiracy or at least cooption with wider groups if it is to be a defining characteristic of decision-making. Where there is chronic political instability, endemic corruption and a self-serving public service, educational planning is as susceptible as planning in other sectors to becoming simply window-dressing (Gould and Amaro-Reyes, 1983). One hopes this is the exception rather than the rule, though it would be unrealistic to suppose that such conditions never occurred. As Damiba (1985) has observed in relation to Burkina Faso (Upper Volta):

> The only hope for the planning of education—and above all for the planning of its reform—lies in the permanent officials of the planning service, who, with each change of government, are forced like Sisyphus to tread once again the weary path of stimulating their new masters to the task of reform.

Information. A second condition is that sufficient information is available for it to be possible to reach rational planning decisions. The extent to which these criteria are met varies widely. Baseline educational statistics on enrolments, teacher supply and demand, and even numbers of schools in some countries, are difficult to obtain and unreliable. There should be no delusion that decision-making will be easier with more comprehensive information, but its consequences should be more apparent, especially if critical parameters can be monitored longitudinally. What constitutes a reasonable expectation of an adequate data base will depend on judgements of the cost and benefits of generating it. As this is not generally regarded as an important operating cost, it may suffer from austerity to the detriment of decision-making quality.

Realistic appraisals. Third, effective decision-making requires: the systematic analysis of need; clear identification of goals; and realistic assessments of the capacity to implement. This is not easy to achieve in practice, as is illustrated by continuing difficulties in all these areas despite long advocacy (Coombs, 1970). There are many examples of the extent to which educational development has been adversely affected by a failure to undertake these stages of planning in the extensive study by Havelock and Huberman (1977) of attempts at educational reform. They identify six principal barriers to change: underestimating the process; personality conflict and motivation; underdevelopment of infrastructure and personnel; financial problems; opposition from key groups; poor social relations. The most important of these (in terms of the variance explained by it within their model) was the first, and their interpretation was to hypothesize

> a causal chain of troubles that begins with lack of adequate preparation; at the beginning of the project nobody makes the very careful analysis of the receiving society and how it works and how it is likely to be impacted (a) by the innovation and (b) by the social sub-system that must be set up to implement the innovation. This lack of planning leads in turn to a lack of clarity both amongst the innovators and others as to exactly what the innovation is supposed to do. The lack of clarity in turn undercuts the support which the project requires from personnel in key positions; it may also lead to personal alienation from the project and quarrelling.

Analysis of needs may therefore be truncated by the need to act and feeling that the problems are obvious when in fact they are not. Action may then be based on erroneous suppositions and a solution produced which does not address underlying difficulties.

Ambiguity over goals is very common. Yet without them, and the ability to define them operationally, planning becomes impossible. The central problem with the definition of goals, and their refinement into more specific statements of intent, is that their expression generally assumes that the process which produces them is broadly representative. This is rarely the case in practice. Whilst it may not be too difficult to reach a normative consensus at the most general level, the translation of this into criteria against which progress may be judged and targets identified is likely to be far more contentious. The mixed motives of participants and differences in values ensure this. It therefore follows that an important but undervalued aspect of the planning process is the encouragement of dialogue between policy-makers and representative client groups. Education systems depend heavily on the voluntary participation of many different actors. In an important sense educational quality is reflected in the nature of the psychological contracts than exist between teachers, pupils, parents and ministry officials concerning the importance of different types of learning and educational end-products. Profound disagreements and contradictions concerning these will negate the impact of any attempts to plan rationally.

There is a temptation for planning and policy to be formulated in an artificial world, where what *ought* to be is assumed to represent what *is*. Implementation under these circumstances may come to mean little more than the promulgation and reiteration of intent. Frustation increases roughly in proportion to the divergence between what is supposed to be happening and what is happening in typical institutions. The reaction from those with a direct interest in the success of a programme may then be either defensive or suppressive. If it is defensive (blaming incompetence, unwillingness to change amongst teachers, lack of resources), it will be designed to maximize the impression that goals have been achieved as far as was possible given external contraints. If subsequent planning is based on this its basis is insecure. If it is suppressive the 'organizational pain' associated

with lack of implementation may be sufficient to ensure that the policy is rapidly shelved and whispered about subsequently only by those bold enough to admit to failure. Bureaucracies, as Weiler (1985) has observed,

> tend to be quite skilful in concealing or minimizing failures (to implement educational plans) and there is precious little research on plan implementation and non-implementation.... It is from a more thorough and extensive analysis of these instances of non-implementation that we would be able to identify another important element in the politics of educational planning.

Unrealistic estimations of the capacity to implement over-ambitious plans are a primary reason for the apparent failures of the planning process. The opportunity to learn from experience is consequently undervalued, as Havelock and Huberman (1977) have also found:

> Inadequate planning, inadequate consideration of implementation, poor connections and confusion about objectives seem to go together. What is really suggested is that many projects pay little heed to the lessons about the innovation process that we have stressed.... particularly the fact that innovation is a problem of system change and system building that must start with a thorough appreciation of the existing connections and the existing bases for social cohesion and social organization.

Some options for planners

The options open for planners concerned about the impact of austerity on provision are fairly clear-cut in principle. They are:

1. Resist diminution of resources through convincing arguments concerned with the value of educational investment.
2. Adapt to restraint by increasing the efficiency of delivery systems.
3. Transfer expenditure away from education ministry budgets and encourage the recovery of costs from those who are educated.

Resisting diminution. The arguments in favour of the first have already been rehearsed and are compelling if they are clearly articulated, forcefully put and based on empirical study at coun-

try, institutional and individual level. In many systems domestic research and evaluation of educational investment is at an early stage and has been neglected for far too long. Without it, assertion, casual empiricism and anecdotal argument have a disproportionate influence on policy. An adequate defence against the prejudices of policy-makers and the self-interest of dominant groups can only be mounted effectively if it is grounded in systematic, well-structured and publicly visible research findings and evaluative studies. These must reflect genuine concern to uncover the impact of previous policy on provision and not merely to validate conclusions that are politically expedient.

If there is a crisis over the availability of resources, among the first questions which need to be answered are:

Has the state reached the limit of its ability to generate revenue through taxation, duties on imported luxury goods, policy on investment and pension funds, exchange controls etc.?

Have any new methods been explored to increase revenue: state lotteries, levies on productive industries that utilize educated manpower, incentives to stimulate contributions to expenditure from companies and private benefactors etc.?

On what basis is investment in other sectors taking place at the expense of that available for educational provision?

Only when these questions have been resolved satisfactorily should other options be explored.

Increasing efficiency. Increasing the efficiency of systems is a priority even where the effects of austerity are not severe. Planners do need to concern themselves with cost-effectiveness, efficient utilization of staff and physical facilities etc., but not independently of understanding the school process and the qualitative inputs that ultimately make the difference between 'façade' and 'action' schools. In this, many planners are at a disadvantage if they themselves have not worked in a variety of the teaching institutions they plan. Highly centralized systems distance the policy-making process from the teaching and learning environment in typical institutions. The planning process is disposed, according to Weiler (1985), 'by the traditions and internal dynamics of bureaucratic organizations to remain within a carefully constructed shell that is made up of data, targets and projections'.

It becomes difficult to appreciate the significance that pressures to achieve cost savings may have on individuals and the conditions they work under. Productivity gains in education are not nearly as easy to achieve as in the production of manufactured goods. Unless radical assumptions are made about changes in delivery systems, it is simply not possible to alter contact time between pupils and teachers substantially without affecting the quality of the interaction that can take place.

Stromquist (1982) has reviewed recent educational innovations to reduce costs and increase efficiency. She identifies three broad types. First, those that depend on new educational technologies, which include the use of radio, television and self-instructional materials. Second, there are innovations within nonformal education, many of which are associated with linking educational experiences with production, community development and the training of rural entrepreneurs. Third, Stromquist identifies nineteen innovations in formal sector provision that have been used to reduce costs. Lewin and Little (Commonwealth Secretariat, 1984) have also examined efforts to make efficient use of educational resources in fifteen Commonwealth countries. For formal-sector provision these can be classified into four main areas of initiative: organizational; administrative; materials production; and teacher training; and these are complemented by the development of various nonformal systems. The opportunities to increase efficiency clearly depend on the special characteristics of educational delivery in each country. These two studies provide an extensive agenda of options.

Relationships between the organization of delivery and cost savings are not simple. For example, Eicher (1984) has shown that the economies of scale do not necessarily apply to increasing school sizes. At primary level, where specialist facilities are uncommon, increasing school size generally replicates existing facilities: more similar classrooms are built. On constant assumptions about occupancy, unit cost will not diminish significantly once basic services (water, electricity etc.) have been provided. They may increase if larger schools require greater catchment areas and children have to travel significant distances to school. Larger buildings may also require more sophisticated methods of construction and this will also increase the unit cost of provision. The optimum school size in sparsely populated

rural areas is therefore likely to be quite small at primary level. In urban areas, where class sizes are already large and there is excess demand, larger schools will not create significant savings on unit costs unless teacher:pupil ratios increase. At secondary level there is probably more scope for economies of scale, since expensive specialist facilities are more commonly provided. The optimum size of secondary institutions is therefore likely to be larger than at primary level, but there will be a point where diseconomies of scale set in. Similar arguments can be applied to higher education, where the scope for economies of scale is often greatest, but the relative scarcity of provision geographically may create political pressures to limit size in favour of distribution throughout the country.

Improving efficiency is concerned with more than reductions in unit costs. Internal efficiency is very low where there are high rates of repetition and drop-out. It may inflate the amount of provision in pupil years needed for a graduate of a particular cycle by a factor of two or three. The scope for increasing internal efficiency may then be greatest in measures that reduce repetition and drop-out (and which imply an increase in short-term costs) than in those that worsen contact ratios with pupils and appear to offer unit-cost savings. The notion of internal efficiency is also inextricably linked with the distribution of resources between levels. Where there are very high tertiary unit costs, a small number of relatively privileged beneficiaries and scant evidence that the subsequent contribution of tertiary graduates to development does warrant expansion in their numbers, the cause of efficiency may best be served by redistributing resources to lower levels. The case for this involves judgements about the utility and social justice of increasing quality and access for the majority while accepting some decline in the numbers of higher-education graduates produced. What these judgements are will depend partly on assessments of the external efficiency of educational provision in its interaction with the labour market and the economy as a whole. They must also reflect non-economic benefits that arise from increasing the proportion of children who succeed in completing at least the first cycle of education available.

Transferring costs. There are several mechanisms through which cost can be transferred from public-expenditure budgets for education. These are:

1. Shifting some of the cost of provision to other ministries' budgets.
2. Generating revenue through the economic activity of educational institutions.
3. Transferring costs to individuals who benefit from provision.
4. Transferring costs to communities that benefit from educational provision.
5. Increasing external assistance from international resources that may be public or private.

The first makes savings to one public-expenditure budget at the expense of another, and thus represents a shift in responsibilities without changing the demand on the public-expenditure budget as a whole. The next three transfer costs. They do this by utilizing the labour of learners (to generate a surplus and/or substitute in-house production for bought-in goods and services), or by effectively taxing individuals or communities through fees and involvement in building projects etc. to increase the contribution made to costs. The final mechanism does provide a free additional input since it derives from surpluses generated elsewhere (though some might argue that in a distant sense these might be regarded as partly deriving from an international economic system that expropriates the surpluses produced within developing countries).

Shifting between budgets. In most countries a proportion of educational expenditure, particularly that associated with training, is spent by ministries other than the ministry of education. It is usually very difficult to define and trace this expenditure through national accounts, and conventions differ widely as to how such expenditure is classified. Ministries of labour often fund training programmes; agriculture and rural development ministries frequently make inputs into extension work of an educational character; non-formal initiatives draw funding from disparate official sources as well as non-government agencies; ministries of health with a commitment to primary health care that does not have an educational component are a rarity. There is therefore a tactical option open to planners whose horizon is bounded by the limits

of a ministry of education budget. This is to examine to what extent its provision duplicates, or might legitimately be seen to fall within the responsibilities of, other agencies. Shedding these responsibilities leaves more resources to support provision within the ministerial budget. This may be particularly attractive where some 'non-educational' departments are being favoured in the internal battle for resources. The risk is the obvious one that activities thought sufficiently marginal to be left to other parts of government may simply wither as a result of confusion over responsibility or unwillingness to change their location. The scope for this kind of tactical response to protect the resources available would seem to be slender. It is most significant in those countries where there is a strong tradition of distributing responsibility effectively.

Economic activity and educational institutions. There is a long history of attempts to mobilize learners to contribute directly with their labour to the material cost of their education. Linking education with production is a well-established pedagogical principle associated with a range of political ideologies. Activity has varied from the modest use of school gardens to produce a proportion of the food needs of pupils to ambitious attempts to produce and market manufactured goods and services. A recent review (Lewin and Jones, 1985) of problems associated with this method of reducing direct costs to government identifies four main difficulties: the choice of commodity and market; protectionism within markets; the control of quality and the level of productivity; and the nature of reward and motivation amongst learners contributing their labour. For practical reasons production based in secondary institutions where this approach has been tried is usually limited to artefacts that can be produced with simple technology and low investment in capital equipment. This restricts opportunities to substitute local production for imported goods, since mass-production techniques and capital-intensive production abroad may well be able to deliver the same product at lower cost and higher quality. Competing in the local market with domestic producers who have to pay the full cost of their labour may undermine the livelihoods of precisely those groups school graduates will join when they leave school. In small markets significant quantities of, for example, vegetables or furniture may cause prices to tumble. If schools are rural-

ly located the production of perishable commodities will be constrained by the local demand and the cost of transport. Protected markets are difficult to enforce. If protection is against imports and applies to all local producers the short-term cost falls on consumers; if it is tied to, say, government contracts for school furniture, it may monopolize a source of employment for school graduates unless there is considerable excess demand. Though the labour cost may be low or negligible if students have to participate as a condition of enrolment, quality control may be very difficult to maintain (as apparently is the case with the chairs produced by the vocational-training skill centres in Zambia (Hoppers, 1984)). Productivity will be low, as the organization is concerned with learning as well as production, and this may offset any comparative advantage in labour costs. Finally, rewards are difficult to match with necessary incentives. If students perceive little return on their labour they may drift away to the informal sector of small-scale business where they can earn more for the same work. They may come to see themselves as exploited in comparison with peers in employment or in other educational institutions that do not link education with production. If the rewards are not linked to productivity both it and the quality of the output may suffer; if they are, a sense of community and self-help may be replaced by a sense of help oneself. It is also fair to observe that where initiatives linking education and production have been successful they have usually depended on charismatic leadership, and this is a very scarce commodity. There are no systems which depend on activity of this kind to meet substantial proportions of running costs, though there are many examples of institutions which have been successful in organizing worthwhile contributions from this kind of source. It is an approach worthy of encouragement but unlikely to offer major opportunities to generate funds to match those provided from the public-expenditure budget.

Transferring costs to individuals. The kind of recovery of cost that is possible from individuals centres around the charging of user fees for participation. These are already widely raised unofficially by schools as 'facilities' fees, laboratory subscriptions, contributions for extra-curricular activities etc. The extent to which they are voluntary or a condition of continued enrolment varies, as does the extent to which they are enforced. Official fees

on the other hand are generally levied on all participants with varying arrangements for fee remission to poor parents. The issues involved in the introduction and raising of such charges have been explored earlier. They do offer an opportunity to improve the aggregate resources available for educational development, but only under certain conditions where it can be shown that this is not achieved at the cost of decreased access and participation by the relatively underprivileged. The argument surrounding them must be approached in a way that clearly discriminates between the advantages of utilizing a fee structure (with or without means-testing) that would not accrue from changes in taxation policy that could raise similar amounts of revenue from a similar catchment group of income-earners. These may be compelling but the case for them needs to be made explicitly, since there are very real risks in terms of diminution in equity.

Transferring costs to communities. Transferring educational costs to communities has been achieved most frequently where contributions in labour and materials have been made to the establishment of new institutions through building programmes. These have ranged from where the inputs have been entirely from the community to those where matching grants or a scarce and expensive resource (e.g. cement) have been provided from public funds. This type of arrangement has proved much easier to stimulate than ones which meet the recurrent costs of running the institutions that have been established. Again, the judgement about how significant a source of additional support this can provide must come to terms with the reasons why this support can be mobilized by the community when it cannot be by the state. The same kinds of equity problems arise as they do with individual fees. Rich communities can mobilize much greater resources at less cost to themselves than poor ones. They should be encouraged to do this, but this needs to be associated with redistributive measures if differences in the standard of provision are not to increase rapidly as the state withdraws from underwriting a proportion of the costs. The obvious mechanism for this—community education taxes progressively related to the wealth of the community—may be more equitable in its effects than a *laissez-faire* abrogation of responsibility for resourcing by central and provincial authorities.

Increased external assistance. The latitude for increasing flows of donor assistance is limited by the financial base of the donors and their willingness to support education projects. Part of the difficulties experienced in some countries in meeting educational costs stems from the effectiveness of previous external support. This has tended to favour capital inputs and has avoided recurrent obligations to the institutions that donor finance has helped to create. The cumulative effect of this involves a kind of double jeopardy: more projects increase the demand on recurrent finance and siphon resources away from domestic capital investment in favour of keeping pace with the growing demands on the recurrent budget; this maintains the attraction of capital projects to donors since they may become virtually the only source of support for these. Moreover, the effectiveness of their previous investment may be compromised by their impact on increasing the stock of educational facilities. Where this argument holds it creates a serious dilemma—requests for assistance may continue to favour more institution-building despite the lack of consolidation of previous initiatives starved of recurrent support and adequate long-term staff development. The real needs for this are subject to the unwillingness to subvent recurrent costs in a seemingly open-ended way. There is an interim position whereby a higher priority could be accorded to the strategic support of recurrent costs that contribute to staff development and are consistent with maximizing the benefits from the investment that has already taken place (Colclough, Lewin and Oxenham, 1985). This seems worthy of detailed consideration.

The foreign-exchange component of external finance is critical when some materials have to be imported and paid for in foreign exchange. Paper for textbooks and writing on is a good example of where its absence may result in small savings but large decrements in the quality of teaching and learning. So also may be contributions to the transport needs of efficient administration, supervision and advisory services. In order to maximize benefit it is important to establish that foreign exchange is allocated and disbursed in ways that ensure the alleviation of these types of bottle-necks and not used to subsidize balance-of-payments problems indiscriminately.

VI. Conclusion

Educational planning, like economics, is concerned with making the best use of scarce resources. Educational planning as a separate area of expertise came of age in the late 1960s. The economists had developed a battery of analytic techniques—manpower forecasting, rate-of-return analysis, and social-demand forecasting—that were to provide the basis for planning education in the most beneficial ways. Development was seen as being inextricably linked to economic growth. Human-capital theory encouraged countries seeking to industrialize to plan for rapid and extensive growth in all forms of educational provision. This seemed both desirable and essential given the strong demand for schooling and widespread shortages of educated manpower. Educational planning therefore took place in a positive atmosphere of growth and optimism where priorities had to be specified but where growth promised the opportunities to satisfy all demands in the long run.

The last ten years have radically changed the nature of the planners' game. A slow-down in economic growth rates has become a fact of life everywhere, with severest effects on the poorest countries. Austerity in public-expenditure allocation has become widespread. The analysis offered here provides little cause for complacency that the problems created by this are likely to be resolved by a return to a more favourable climate. Even if they did, there is a danger that the damage that educational systems are suffering could not easily be repaired in a short period of time. The planning environment has changed and the need to discriminate between alternatives, many of which are

unpalatable, has increased if the impressive gains in educational provision that have been achieved since the 1960s are to be sustained.

The purpose behind this book is to alert the planning community to the ways in which their activity needs to reflect these changes. It is central to this process that it is seen as having prominent qualitative dimensions as well as those that require quantitative adjustment. Threshold effects seem likely to operate in systems under pressure whereby small savings may have a disproportionate impact on the quality of provision. Decision-making in organizations under stress may proceed according to different procedures, and goal displacement occurs within providing agencies which values the interests of members over those of the clients that they are intended to serve. There are real dangers that the pattern of allocation in conditions of austerity or contraction may reflect pathways of least resistance rather than the protection of those least able to protect themselves. Thus it has been a major concern here to emphasize the importance of not turning away from the needs of the most vulnerable in the cause of making short-term adjustments to balance budgets. Valuing the progress which has been made in democratizing access to education and extending opportunities to the poorest groups must remain a central commitment. Many countries have recognized the centrality of non-economic developmental goals, amongst which are those directed towards the establishment of just social orders where education is available to as many as possible without discrimination through the purse. Valuing provision for the vulnerable is therefore a central theme which requires tenacious application in the planning environment of the late 1980s.

In conclusion, it is important to draw attention to six points. They are offered as food for thought to those who have the unenviable but critical task of grappling with planning in austerity. They are not solutions, nor could they be in a general treatise of this kind. Policy decisions require application of ideas in this monograph to the specific circumstances of different countries by those with a sensitive and comprehensive understanding of their educational systems. They do, however, suggest ways in which planners can acquit themselves well in responding to the challenges that confront them.

1. Planning within stable or reducing budgets is not simply the opposite of planning for growth. Bureaucratic organizations with long traditions of planning procedures that seem to have worked in the past may be slow to grasp this reality. Indeed, stress and crisis within organizations are antithetical to any fundamental reappraisal of patterns of operation, unless these are so severe that the system breaks down catastrophically. The result is likely to be coping strategies that deny the need to rethink budgeting procedures and to re-examine priorities in favour of minimizing 'organizational pain' and conflict within the organization. Equal misery, where pro-rata reductions are made in budget heads, may be one coping strategy which has the apparent merit of fairness. Another is likely to focus on reducing provision for the least powerful groups where there is least risk of political backlash. A third uses administrative convenience as the main criterion, rather than concern for the quality of the service. As has been argued, this is likely to result in drift in the distribution of budgets which is unplanned by criteria related to the quality of provision that can be maintained. None of these coping strategies are likely to optimize the allocation of scarce resources based on servicing need.

2. The planners' inheritance from the past is one that offers a narrow range of planning techniques which are widely used, i.e. manpower requirements forecasting and cost–benefit analysis (rates of return). These have well-known limitations, not least their tendency to focus attention on critical manpower shortages at the expense of balanced development across systems. The history of their use serves to emphasize the dangers of depending too single-mindedly on them. There are several variations on these approaches and a number of different methods available for exploring how best to plan the links between educational provision and employment opportunities, a central concern of many educational planners. These include the basic arithmetic of youth unemployment, the ILO Key Informants System, localized rather than national manpower planning with devolved authority, the techniques of rapid rural appraisal, and the much greater use of existing information collected for other purposes, e.g. in the national census and household surveys (Little, 1986). Much more use needs to be made of this range of approaches to pro-

vide opportunities to balance the limitations of one approach with the advantages of others. This may detract from the overall coherence of the planning process, since it suggests moving away from the use of one single internally consistent set of procedures. However, it has considerable advantages in providing more insight into the complexities of maintaining service and provision according to diverse criteria that are not concerned only with matching the supply and demand of educated personnel. From the classification of educational goals developed through an analysis of national plans (Lewin, Little and Colclough, 1982) it is clear that a single approach to educational planning (e.g. using manpower requirements) cannot hope to provide planning information for the full range of these goals. Psacharopoulos and Hinchliffe (1983) make this point strongly in arguing for much greater attention to planning that does incorporate a range of techniques within an administrative framework which allows them all to make inputs into the decision-making process.

3. A broader implication from this new thinking and the discussion in Chapter V of the intellectual frameworks within which planning takes place is that it is time for planners to recognize and reflect on the paradigms within which they work. These determine the questions that they address themselves to and the way they perceive them. They also condition the responses they make to changing conditions. Whether planning should be directed primarily to system maintenance or to radical change does not have to be seen as an either/or question. There can be intermediate and more eclectic positions which recognize the need to respond flexibly to external pressures. The thrust of the argument here is to discourage retrenchment, in austerity, towards the security of regulation and comfortable constructed reality imposed centrally on clients who do not necessarily share it. Similarly, greater emphasis on the quality of delivery systems is only really possible if more weight is given in the planning process to qualitative dimensions. This implies the acceptance of types of data which have been excluded in the past as too subjective and unreliable. Detailed accounts of school process are singularly lacking in most developing countries. Little is known about what rural primary-school head teachers actually do with their time, though a lot is often specified about what they should

do. The latter is an insecure basis for planning to improve quality. This does not require an unlikely revolution in the planners' paradigm. It can occur through increased openness to ideas from outside the dominant traditions and preparedness to incorporate these in an acceptable way. An important and related shift that is of great importance where resources are unlikely to grow is towards planning based on need rather more than on effective demand. But this will only be attractive where the case for meeting the needs of the vulnerable can be put strongly enough for there to be a genuine commitment to this. Centrally determined demand-led planning offers little protection to the marginalized, whose demand cannot be expressed effectively. It depends also on the judgement that the market-place is not a good regulator of services to meet basic human needs.

4. Analysis of the room to manoeuvre can enhance the degrees of freedom within which planning takes place. This needs to be accompanied by monitoring systems which enable frequent judgements to be made on the impact of measures taken to reallocate scarce resources. Some preliminary ideas on the nature of the sensitivity analysis needed have been discussed. These require systematic rather than piecemeal application, and would help satisfy the need that exists for baseline data against which to make comparisons and judge progress. They might be incorporated into the 'annual routine' suggested by Dougherty (1983), but must go beyond the narrow concerns of manpower-planning units. Their introduction is likely to dissuade those who believe that there is a 'quick fix' to problems of a recurrent nature that can only be resolved through sustained effort. Sensitivity-monitoring should place emphasis on the impact of resource-saving measures and attempts to increase efficiency on the most vulnerable sectors of the community. This is especially the case where cost recovery and user fees are being proposed to assist with the refinancing of public services which are intended to serve populations as a whole equitably for collective benefit.

5. None of these conclusions should be seen to detract from creative searches for incremental savings and improvements in efficiency. Real and worthwhile benefits can be derived from these. What is crucial is that these initiatives take into account

the institutional and pedagogical consequences of the savings produced. National accounting systems use different criteria of effectiveness from those applicable at the institutional and classroom level. They are not sensitive to factors that have no simple financial analogues. Teacher morale is one of these and its maintenance is critical to performance in the classroom. The impact of economies on this can be ignored only at the risk of accelerating the development of 'façade' institutions within which little of educational value trakes place.

6. It would be arrogant to suppose that the analysis and ideas proposed here are all novel. Many of them can be found in the work of others, but they have not to my knowledge been examined within the context of the changed conditions for educational planning in developing countries described here. They suggest a need for planners to engage actively with the challenges presented by these and take the initiative in responding, rather than acquiesce in what some may feel is the inevitable. Such planners are likely to share:

A commitment to educational provision of the greatest quality to the largest numbers.

A desire to protect the most vulnerable from the privations that austerity induces.

An attachment to the role of the planner as an honest broker of possibilities, aspirations and expectations which stops short of the partisan but does not conceal passionate convictions.

Willingness to acquire the technical proficiency needed to understand and evaluate alternative courses of action.

An openness to collaboration and co-operation with those whose sectoral interests are different and with whom it is possible to make common cause.

A sensitivity to the reality of professional life in educational institutions, the richness of the educational process, and the rewards and frustrations of the competent practitioner committed to educational ends that can enhance the quality of life, which is the ultimate purpose of development in every community.

It is my privilege to make a contribution to the sharing of these attributes with the planning community.

Bibliography

AHMED, M. 1985. "Planning issues in basic education: the need for a new paradigm". In: *Educational planning in the context of current development problems.* Paris, Unesco: IIEP.

AINSWORTH, M. 1984. *User charges for social sector finance: policy and practice in developing countries.* Washington, DC, World Bank, Country Policy Department.

ARYE, G.A. 1977. *Small-scale manufacturing activities: a study of the interrelationships between the formal and informal sectors in Kumasi, Ghana.* Geneva, International Labour Organization. (World Employment Programme, Urbanization and Employment Research Programme no. 23.)

BEHRMAN, J. and BIRDSALL, N. 1983. *The implicit equity-productivity tradeoff in the distribution of public resources to education in Brazil.* Washington, DC, World Bank. (Country Policy discussion paper no. 1983-1.)

BENNELL, P. and GODFREY, M. 1978. *Public sector salaries policy in Africa and the Near East: the UK connection.* Sussex, Institute of Development Studies. (Mimeo.)

BERRY, A. 1980. "Education, income and urban poverty". In: T. King (ed.), *Education and income.* Washington, DC, World Bank. (Staff working paper no. 402.)

BIRDSALL, N. 1982. *The impact of school availability and quality on children's schooling in Brazil.* Washington, DC, World Bank, Population and Human Resources Division. (Discussion paper no. 82-8.)

BIRKS, J.S. and SINCLAIR, C.A. 1978. *Human capital on the Nile: development and emigration in the Arab Republic of Egypt and the Democratic Republic of the Sudan.* Geneva, International Labour Organization. (World Employment Programme Research working paper WEP 2-26/WP27.)

BLAU, P.M. 1955. *The dynamics of bureaucracy.* Chicago, Ill., University of Chicago Press.

BLAUG, M. 1973. *Education and the employment problem in developing countries.* Geneva, International Labour Organization.

BLAUG, M., LAYARD, R. and WOODHALL, M. 1969. *The causes of graduate unemployment in India.* London, Allen Lane The Penguin Press.

BROCK, C. 1981. "Education in Latin America: aspects and issues in the mid-twentieth century". *International journal of educational development,* vol. 1, no. 1.

BURRELL, G. and MORGAN, G. 1979. *Sociological paradigms and organisational analysis.* London, Heinemann Education.

CAIN, G.G. 1975. "The challenge of dual and radical theories of the labour market to orthodox theory". *American economic review,* vol. 65, no. 2.

CARNOY, M. 1980. "Segmented labour markets". In: M. Carnoy, H.M. Levin and K. King, *Education, work and employment.* Paris, Unesco: IIEP.

CARNOY, M., LEVIN, H., NUGENT, R., SUMRA, S., TORRES, C. and UNSICKER, J. 1982. "The political economy of financing education in developing countries". In: *Financing educational development.* Ottawa, International Development Research Centre. (IDRC-205e.)

CARR-HILL, R. and LINTOTT, J. 1985. *Comparative analysis of statistical data on adult education for eighty-four countries.* Paris, Unesco, Office of Statistics. (ST-85/WS/6.)

CEYLON, CENTRAL BANK OF. 1980. *Annual report.* Colombo.

—. 1981. *Annual report.* Colombo.

CHERNICHOVSKY, D. 1981. *Socioeconomic and demographic aspects of school enrolment and attendance in rural Botswana.* Washington, DC, World Bank, Population and Human Resources Division. (Discussion paper no. 81/47.)

COLCLOUGH, C. 1980. *Primary schooling and economic development.* Washington, DC, World Bank. (Staff working paper no. 399.)

—. 1983. "Are African governments as unproductive as the Accelerated Development report implies?" *Bulletin* (Institute of Development Studies, Sussex), vol. 14, no. 1.

COLCLOUGH, C.C. and HALLAK, J. 1976. *Some issues in rural education: equity, efficiency and employment.* Sussex, Institute of Development Studies. (Discussion paper no. 89, January 1986.)

COLCLOUGH, C.C., LEWIN, K.M. and OXENHAM, J.P. 1985. "Donor agency support for primary education: strategies reconsidered". *International journal for education and development,* vol. 5, no. 4.

COMMONWEALTH SECRETARIAT. 1984. *Responding to austerity: the efficient use of education resources in Commonwealth countries.* Paper prepared by K.M. Lewin and A.W. Little for the Meeting of Commonwealth Ministers of Education, Cyprus, 1984.

COOMBS, P.H. 1970. *What is educational planning?* Paris, Unesco: IIEP (Fundamentals of educational planning 1.)

—. 1985. *The world crisis in education: the view from the eighties.* Oxford University Press.

COOMBS, P.H. and CHAUDHURY, K. 1981. *World trends and prospects for educational costs and expenditures 1960-2000.* Essex, Conn., International Council for Educational Development.

CORNIA, G.A.A. 1984. "Survey of cross sectional and time series literature on factors affecting child welfare". In: Unicef, *The impact of the world recession on children.* Headington, Pergamon.

DAMIBA, A. 1980. "Educational planning in theory and practice". In: H. Weiler (ed.), *Educational planning and social change.* Paris, Unesco: IIEP.

—. 1985. "The role of planning in the design and implementation of the educational reform in Upper Volta". In: *Educational planning in the context of current development problems.* Paris, Unesco: IIEP.

DORE, R.P. 1975. "The future of formal education in developing countries". *International development revue,* London, no. 2.

—. 1976*a*. *The diploma disease.* London, Unwin Education.

—. 1976*b*. "Human capital theory: the diversity of societies and the problem of quality in education". *Higher education* (Elsevier, Amsterdam, vol. 5, pp. 79–102.

DOUGHERTY, C. 1983. "Manpower planning from three points of view—country, technical assistance agency and lending agency". In: G. Psacharopoulos, K. Hinchliffe, C. Dougherty and R. Hollister, *Manpower issues in educational investment: a consideration of planning processes and techniques.* Washington, DC, World Bank. (Staff working paper no. 624.)

EICHER, J.C. 1984. *Educational costing and financing in developing countries: focus on sub-Saharan Africa.* Washington, DC, World Bank. (Staff working paper no. 655.)

—. 1985. "L'évolution des systèmes d'enseignement dans le monde de 1960 à nos jours: aspects économiques et financiers". (Unpublished mimeo., University of Dijon.)

EICHER, J.C. and ORIVEL, F. 1980. "The allocation of resources to education throughout the world". *Current studies and research in statistics.* Paris, Unesco. (CSR/E/35.)

FIELDS, G.S. 1980. "Education and income distribution in developing countries. A review of the literature". In: T. King (ed.), *Education and income.* Washington, DC, World Bank. (Staff working paper no. 402.)

FOXLEY, A. and RACZYINSKI, D. 1984. "Vulnerable groups in recessionary situations: the case of children and the young in Chile". In: Unicef, *The impact of the world recession on children.* Headington, Pergamon.

GARCIA-THOUMI, I. 1983. *ODA from developed countries. Finance and development.* Washington, DC, International Monetary Fund.

GODFREY, M. 1976. *Brain drain—the disengagement alternative.* Report to the UN Centre for Development Planning, Projections and Policies, New York.

GOULD, D.J. and AMARO-REYES, J.A. 1983. *The effect of corruption on administrative procedures: some examples from developing countries.* Washington, DC, World Bank. (Management and development series no. 7/World Bank staff working papers no. 580.)

GREEN, R.H. and SINGER, H. 1984. "Sub-Saharan Africa in depression: the impact on the welfare of children". In: Unicef, *The impact of the world recession on children.* Headington, Pergamon.

GRIFFITH-JONES, S. 1986. *The debt crisis in the context of adjustment and development with a human face.* A report for Unicef (forthcoming).

HADDAD, W. 1978. *Educational effects of class size.* Washington, DC, World Bank. (Staff working paper no. 280.)

HALLAK, J. and CAILLODS, F. 1981. *Education, training and the traditional sector.* Paris, Unesco: IIEP. (Fundamentals of educational planning 31.)

HANDY, C. 1976. *Understanding organizations.* Harmondsworth, Penguin Books.

HARDIN, G. 1968. "The tragedy of the commons". *Science*, no. 162, pp. 1243-8.

HAVELOCK, R.G. and HUBERMAN, A.M. 1977. *Solving educational problems: the theory and reality of innovation in developing countries.* Paris, Unesco, International Bureau of Education. (Studies and surveys in comparative education.)

HELLER, P.S. and CHEASTY, A. 1984. "Sectoral adjustment in government expenditure in the 1970s: the educational sector in Latin America". *World development*, vol. XII, no. 10.

HEWTON, E. 1986. *Education in recession: crisis in county hall and the classroom.* London, Allen & Unwin.

HEYNEMAN, S.P. 1976. "Influences on academic achievement: a comparison of results from Uganda and more industrialized societies". *Sociology of education*, no. 49, July.

—. 1983*a*. "Improving the quality of education in developing countries". In: A. Habte, G. Psacharopoulos and S.P. Heyneman, *Education and development: views from the World Bank.* Washington, DC, World Bank.

—. 1983*b*. "The distribution of primary school quality within high and low income countries". *Comparative education review*, vol. 27, no. 1, February.

—. 1985. "Diversifying secondary school curricula in developing

countries: an implementation history and some policy options". *International journal of educational development*, vol. 5, no. 4.

HICKS, N. and KUBISCH, A. 1984. "Cutting government expenditure in LDCs". *Finance and development*. Washington, DC, International Monetary Fund.

HOPPERS, W. 1984. "From school to work: a study of youth, non-formal training and work in Lusaka". (Unpublished Ph.D., University of London.)

INKELES, A., SMITH, D. 1974. *Becoming modern*. London, Heinemann.

INTERNATIONAL INSTITUTE FOR EDUCATIONAL PLANNING. 1985. *Educational planning in the context of current development problems*. Paris, Unesco: IIEP.

INTERNATIONAL LABOUR ORGANIZATION. 1971. *Matching employment opportunities and expectations: programme of action for Ceylon*. Geneva, ILO.

—. 1972. *Employment, incomes and inequality: strategy for increasing productive employment in Kenya*. Geneva, ILO.

—. 1974. *Sharing in development: a programme of employment, equity and growth for the Philippines*. Geneva, ILO.

—. 1976. *Employment growth and basic needs: a one world problem*. Geneva, ILO.

JALLADE, J.P. 1974. *Student loans in developing countries. An evaluation of the Colombian performance*. Washington, DC, World Bank. (Staff working paper no. 182.)

—. 1977. *Basic education and income inequality in Brazil: the long term view*. Washington, DC, World Bank. (Staff working paper no. 268.)

—. 1982. "Basic education and income inequality in Brazil". *World development*, vol. 10, no. 3.

JOLLY, R. and CORNIA, G.A. 1984. "Introduction". In: Unicef, *The impact of the world recession on children*. Headington, Pergamon.

KETUDAT, S. 1985. "The relations between research, planning, decision making and implementation: the Thai experience in primary education reform". In: International Institute for Educational Planning, *Educational planning in the context of current development problems*. Paris, Unesco: IIEP.

KING, K. 1977. *The African artisan*. London, Heinemann.

—. 1984. *Education and youth unemployment: some propositions*. Ninth Conference of Commonwealth Education Ministers, Cyprus, July 1984. (Working paper on education and youth unemployment.)

—. 1985*a*. *The planning of technical and vocational education and training*. Paris, Unesco: IIEP. (IIEP occasional paper 72.)

—. 1985*b*. *Manpower, technology and employment in Africa: internal and external policy agendas*. Edinburgh, Centre of African Studies, Edinburgh University. (Occasional paper no. 13.)

KUHN, T. 1962. *The structure of scientific revolutions.* 2nd ed., 1970. Chicago, Ill., University of Chicago Press.

LEWIN, K.M. 1980. "Curriculum renewal and examination reform: a case study from Malaysia". *Bulletin* (Institute of Development Studies, Sussex), vol. 11, no. 2.

—. 1981. "Science education in Malaysia and Sri Lanka: curriculum development and course evaluation 1970–1978". (Unpublished D. Phil. thesis, University of Sussex.)

—. 1983. *The political economy of educational planning in recession.* The British and Irish Development Studies Association, Annual Conference, Institute of Development Studies at the University of Sussex, September. (Conference paper.)

—. 1984. "Selection and curriculum reform". In: J. Oxenham (ed.), *Education versus qualification.* London, Unwin Education.

—. 1985*a*. *Educational goals and national development.* Headington, Pergamon (International encyclopaedia of education.)

—. 1985*b*. "Quality in question. A new agenda for curriculum reform in developing countries". *Comparative education*, vol. 21, no. 2.

—. 1986*a*. "Educational finance in recession". *Prospects*, vol. XVI, no. 2.

—. 1986*b*. *Patterns of educational growth in historical perspective.* In Occasional Paper no. 3. British Comparative and International Education Society.

LEWIN K.M. and JONES, R. 1985. *Learning about science and technology outside school: project review and commentary.* Report to the Commonwealth Secretariat, London, October 1985.

LEWIN, K.M., LITTLE, A.W. and COLCLOUGH, C.C. 1982. "Adjusting to the 1980's; taking stock of educational expenditure". In: *Financing educational development.* Ottawa, International Development Research Centre. (IDRC-205e.)

LITTLE, A.W. 1978. *The occupational and educational expectations of students in developed and developing countries.* Sussex, Institute of Development studies. (Research report; Education report no. 3.)

—. 1982. "The development of the child's understanding of the causes of academic success and failure". (Unpublished D. Phil., University of Sussex.)

—. 1984*a*. "Combating the diploma disease". In: J. Oxenham (ed.), *Education versus qualification.* London, Unwin Education.

—. 1984*b*. "Education, earnings and productivity—the eternal triangle". In: J. Oxenham (ed.), *Education versus qualification.* London, Unwin Education.

—. 1986. "Planning the education–employment link: a brief guide to current methods". *International journal of educational development*, vol. 6, no. 2.

LOCKHEED, M.E., JAMIESON, D.T. and LAU, L.J. 1980. "Farmer education and farm efficiency: a survey". In: T. King (ed.), *Education and income*. Washington, DC, World Bank (Staff working paper no. 402.)

MCNAMARA, V. 1980. "School system structure curriculum, SSCEP and functional motivation for learning". *Journal of education* (Papua New Guinea), vol. 16, no. 1.

MALAYSIA, GOVERNMENT OF. 1985. *Economic report 1985/86*. Kuala Lumpur, Ministry of Finance.

MEESOOK, O.A. 1984. *Financing and equity in the social sectors in Indonesia: some policy options*. Washington, DC, World Bank. (Staff working paper no. 703.)

MERTON, R.K. 1968. *Social theory and social structure*. New York, Free Press.

ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT. 1984. *The Development Assistance Committee (DAC) Review 1984*. Paris, OECD.

—. 1985. *The Development Assistance Committee (DAC) Review 1985*. Paris, OECD.

OXENHAM, J. 1984*a*. *New opportunities for change in primary schooling. Notes and comments*. Paris, Unesco. (NS141.)

—. 1984*b* (ed.). *Education versus qualification*. London, Unwin Education.

PAPUA NEW GUINEA. 1983. *Report of the Standards Commission*. Port Moresby, Department of Education.

PSACHAROPOULOS, G. 1981. "Returns to education: an updated international comparison". *Comparative education*, vol. 17, no. 3.

PSACHAROPOULOS, G. and HINCHLIFFE, K. 1983. "From planning techniques to planning process". In: G. Psacharopoulos, K. Hinchliffe, C. Dougherty and R. Hollister, *Manpower issues in educational investment: consideration of planning processes and techniques*. Washington, DC, World Bank. (Staff working paper no. 624.)

PSACHAROPOULOS, G. and WOODHALL, M. 1985. *Education for development: an analysis of investment choices*. Oxford University Press.

RAJ, K.N. 1984. "The cause and consequences of world recession". In: Unicef, *The impact of the world recession on children*. Headington, Pergamon.

RUTTER, M. 1980. *Fifteen thousand hours*. Harmondsworth, Penguin Books.

SEERS, D. 1983. *The political economy of nationalism*. Oxford University Press.

SILVERMAN, D. 1970. *The theory of organisations*. London, Heinemann.

SIMMONS, J. and ALEXANDER, L. 1980. "School achievement in developing countries". In: J. Simmons (ed.), *The education dilemma.* Pergamon (United States).

SOMERSET, H.C.A. 1982. *Examination reform: the Kenya experience.* Washington, DC, World Bank. Report to the Education Department.

STROMQUIST, N. 1982. "A review of educational innovations designed to reduce costs". In: *Financing educational development.* Ottawa, International Development Research Centre. (IDRC-205e.)

TAN, J.-P., LEE, K.H. and MINGAT, A. 1984. *User charges for education: the ability and willingness to pay in Malawi.* Washington, DC, World Bank. (Staff working paper no. 661.)

THOBANI, M. 1983. *Charging user fees for social services: the case of education in Malawi.* Washington, DC, World Bank. (Staff working paper no. 572.)

THOMPSON, A.R. 1981. "The Addis Ababa Conference in retrospect". *International journal of educational development,* vol. 1, no. 1.

TIBI, C. 1987. *Les déterminants des coûts: une perspective internationale. Synthèse de la recherche sur les coûts dans les établissements.* Paris, Unesco: IIPE.

TURNER, R.H. 1958. "Sponsored and contest mobility in the school system". Reprinted in: E. Hopper, 1971, *Readings in the theory of education systems.* London, Hutchinson.

TURNHAM, D. and JAEGER, J. 1971. *The employment problem in less developed countries: a review of the evidence.* Paris, OECD.

UNESCO. 1982. *Public expenditure on education in the world. Regional and country trends, 1970–1979.* Paris, Division of Statistics on Education. (STE/FIN/4.)

——. 1983*a*. *Public expenditure on education in Asia and the Pacific; Goals, trends (1970–1980) and future prospects* (by P. Herold, Q. Khan and H. Reiff). Paris, Division of Educational Policy and Planning. (Reports studies C108.)

——. 1983*b*. *Thailand. Education Sector survey. A joint EFD (Unesco)/NEC (Thai Government) study.* Paris. (Report no. 184 EFA-5.)

——. 1984. *Quality improvement of general education. Evaluation report. UNDP/Unesco Project SRL/85/005, Sri Lanka.* Paris.

——. 1985. *Public expenditure on education in the world: regional and country trends, 1970–1982* (prepared by I. Cocco and G. Nascimento). Paris, Unesco, Division of Statistics on Education. (STE/FIN/5.)

UNICEF. 1984. *The impact of the world recession on children.* Headington, Pergamon.

UNITED NATIONS. ECONOMIC COMMISSION FOR ASIA AND THE FAR EAST. 1974. *Economic survey of Asia and the Far East.* Part one: *Education and employment.*

WACHTER, P. 1974. "Primary and secondary labour markets: a critique of the dual approach". In: A. Okun and G. Perry (eds.), *Brookings papers on economic activity*, no. 2, 1974.

WATSON, J.K.P. 1981. "The impact of the Karachi Plan of educational development in Asia 1960–1980". *International journal of educational development*, vol. 1, no. 1.

WEILER, H. 1983. *Aid for education: the political economy of international cooperation in educational development*. Ottawa, International Development Research Centre (MR84e).

—. 1985. "The political economy of educational planning". In: *Educational planning in the context of current development problems*. Paris, Unesco: IIEP.

WOLFF, L. 1984. *Controlling the costs of education in eastern Africa: review of data issues and policies*. Washington, DC, World Bank. (Staff working paper no. 702.)

WOODHALL, M. 1983. *Student loans as a means of financing higher education*. Washington, DC, World Bank. (Staff working paper no. 599.)

WORLD BANK, 1980*a*. *World development report*. Washington, DC.

—. 1980*b*. *Education Sector policy paper*. Washington. DC.

—. 1981. *Accelerated development in sub-Saharan Africa: an agenda for action*. Washington, DC, International Bank for Reconstruction and Development.

—. 1983*a*. *World development report*, Washington, DC.

—. 1983*b*. *Education and development: views from the World Bank* (by A. Habte, G. Psacharopoulos and S. Heyneman). Washington, DC.

—. 1984. *World development report*. Washington, DC.

—. 1985. *World development report*. Washington, DC.

IIEP publications and documents

More than 500 titles on all aspects of educational plannning have been published by the International Institute for Educational Planning. A comprehensive catalogue, giving details of their availability, includes research reports, case studies, seminar documents, training materials, occasional papers and reference books in the following subject categories:

Economics of education, costs and financing

Manpower and employment

Demographic studies

The location of schools and sub-national planning

Administration and management

Curriculum development and evaluation

Educational technology

Primary, secondary and higher education

Vocational and technical education

Non-formal, out-of-school, adult and rural education

Copies of the catalogue may be obtained from the IIEP on request.

(B.3079) Printed in Belgium by Ceuterick s.a.
Brusselse straat 153 B-3000 Leuven
A. Struyf Oude Baan 353 B-3000 Leuven

The International Institute for Educational Planning

The International Institute for Educational Planning (IIEP) is an international centre for advanced training and research in the field of educational planning. It was established by Unesco in 1963 and is financed by Unesco and by voluntary contributions from individual Member States.

The Institute's aim is to contribute to the development of education throughout the world, by expanding both knowledge and the supply of competent professionals in the field of educational planning. In this endeavour the Institute co-operates with interested training and research organizations in Member States. The Governing Board of the IIEP, which approves the Institute's programme and budget, consists of eight elected members and four members designated by the United Nations Organization and certain of its specialized agencies and institutes.

Chairman: Malcolm Adiseshiah (India), Chairman, Madras Institute of Development Studies

Designated members: Aklilu Habte, Director, Education Department, International Bank for Reconstruction and Development
Mohamed Shahari Ahmad Jabar, Director, United Nations Asian and Pacific Development Centre
Wajih D. Maalouf, Chief, Agricultural Education and Extension Service, United Nations Food and Agriculture Organization
Goran Ohlin, Assistant Secretary-General, Office for Development Research and Policy Analysis, Department of International Economic and Social Affairs, United Nations

Elected members: Henri Bartoli (France), Professor, University of Paris I, Pantheon-Sorbonne, Paris
Hellmut Becker (Federal Republic of Germany), Max-Planck Institute for Human Development and Education, Berlin (West) and Honorary Professor, Free University of Berlin (West)
Georges Ngango (Cameroon), Minister of Education, Yaounde
Mohammad A. Rasheed (Saudi Arabia), Director-General, Arab Bureau of Education for the Gulf States, Riyadh
Sippanondha Ketudat (Thailand), President, National Petrochemical Corporation Ltd., Bangkok
Victor Urquidi (Mexico), Research Professor, El Colegio de Mexico
Alexandre P. Vladislavlev (USSR), First Vice-President, All-Union Council of Scientific and Engineering Societies, (VSNTO), Moscow

Inquiries about the Institute should be addressed to:
The Director, IIEP, 7-9, rue Eugène-Delacroix, 75116 Paris

The book

The economic and social conditions in which planning takes place have changed dramatically since the 1960s. The resources available to governments to support educational development have been adversely affected by the knock-on effects of global economic recession. Political shifts in priorities and debt problems have created pressures to limit or diminish public-sector expenditure. The consequences of this for effective planning are numerous since planning with stable or contracting resources is not simply the opposite of planning with the expectation of growth. The quantitative and qualitative gains in educational provision made in the last two decades are likely to be compromised unless new planning method are developed which recognize these changed circumstances and respond to them positively.

This study represents a first attempt to explore in detail the nature of pressures on educational budgets and the impact of austerity on the quantity and quality of educational provision. It develops an understanding of changes in the organizational climate which shapes decision-making in conditions of parsimony. Planning techniques are proposed to assist in identifying the policy options open and in devising monitoring systems that can indicate the sensitivity of educational quality to changes in inputs. Strategies are identified to resist the diminution of resources for education, increase the efficiency of delivery systems and re-finance provision from sources other than public expenditure. A central theme throughout is to devise planning methods that can protect provision for the most vulnerable groups that are the most at risk from reductions in educational budgets.

The ideas in the book are directly relevant to all those working in education systems with increasing resource constraints. They are of special interest to those involved in policy formulation and detailed planning intended to maintain quality and access whilst controlling costs in unfavourable economic conditions.

The author

Keith Lewin is on the staff of the University of Sussex and is an Associate of the Institute of Development Studies. He has worked extensively in Asia on educational planning, curriculum development and science education and is the founding director of the Masters programme for developing country educators at Sussex. Currently he is the UNDP consultant on educational research to the National Institute of Education in Sri Lanka and co-ordinator of the Sussex-Beijing-Hangzhou educational exchange programme.

137

ISBN 92-803-1126-3

BEST COPY AVAILABLE